"WHAT BRINGS YOU HERE TODAY?"
PERSPECTIVES OF OLDER WOMEN ON HEARING, HELP-SEEKING FOR HEARING PROBLEMS, AND THEIR FIRST AUDIOLOGY APPOINTMENT

by

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ABSTRACT

Persons with hearing problems typically wait many years from the time hearing difficulties are noticed until an appointment is made for an audiologic assessment. Some hard-of-hearing persons never seek help. Many who finally seek and could benefit from rehabilitative help delay taking further action after their hearing is tested. These facts suggest the need for more research into the nature of help-seeking for hearing loss.

The present study explored the perspectives of older women on their hearing, hearing problems, and help-seeking for hearing problems around the time of their first audiologic assessment. A major goal of this research was to explore the links between individuals' experiences living with a hearing loss and the process of help-seeking. A related goal was to examine how these experiences and the help-seeking process may influence and be influenced by the interaction of help-seekers with the audiology system.

The main participants in this study were older women living in the community who were seeking help for age-related hearing loss (presbycusis). They were interviewed in-depth from the time they booked their first audiology appointment, through the appointment itself, and up to six weeks following the appointment. Data also included interviews with family members and the assessing audiologist, participant observation of the audiology appointments by the researcher, and journal writing by each participant. Data were coded and organized into a theoretical framework, guided by the principles of grounded theory.

The findings of this study indicate that participants engaged in a protracted self-assessment of their hearing before, during, and after seeking help for hearing problems. The self-assessing process is influenced by many factors that facilitate or delay help-seeking; some factors may do each at different points in time. The result of the complex combining of these factors is a "push-pull" effect that moves persons iteratively toward and away from help-seeking. This finding is expressed in the core category of the theoretical framework of this study: "the spiral of decision-making in self-assessing
hearing”. Findings suggest that the audiology assessment itself and, in particular, the different rehabilitative foci of the audiologist and the hard-of-hearing person may be an important influence in self-assessing and decision-making regarding hearing problems.

Three themes: contrasting/comparing, cost vs. benefits, and control, were identified as significant in self-assessing. Persons contrast and compare their hearing against many “yardsticks”. They evaluate the relative costs and benefits, including the perceived loss of control, of specific actions taken for hearing problems. The exact nature of the relationships among these three themes remains to be determined. The results of this study underscore the need for further research into the nature of the interaction between audiologists and hard-of-hearing persons. As well, the findings of this study may be applicable to the more general study of help-seeking for health conditions related to aging.
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CHAPTER 1
INTRODUCTION

The General Problem

"What brings you here today?" I often initiated a conversation with a patient who was seeing me, an audiologist, for the first time with this question. It was simultaneously helpful and frustrating. Helpful in that, given the short time available in a busy clinic, it was my best chance for "open" discussion of the patient's reasoning behind seeking professional help for hearing problems. It was frustrating in that I felt this question and the answers it elicited just chipped at the tip of an iceberg. Many older individuals with acquired hearing loss related a litany of communication problems that stretched back many years; yet this was their first hearing test. My professional experience is consistent with research that indicates a lag of anywhere from eight to more than twenty years between the time one is first aware of hearing difficulties and when professional hearing help is sought (e.g., Brooks, 1979; Getty & Hétu, 1994; Kyle, Jones, & Wood, 1985; Stephens, Barcham, Corcoran, & Parsons, 1980; Watson & Crowther, 1989). This lag has important implications for the person with hearing problems, those in close relationships with that person, and the hearing health professional who provides audiologic rehabilitation.

My personal experience as a rehabilitative audiologist raised many questions. Why do persons with hearing problems, particularly related to aging, wait so long to seek help from audiologists? Do people seek help from other sources or use other resources of which audiologists are unaware? What are the factors or triggers that finally bring the hard-of-hearing person to book a hearing test?

For every person who shows up to be tested, many more never get to the point of making an appointment. For those who do book and keep their appointments and for whom rehabilitative plans are discussed, many delay further action, often for several years. Some never take subsequent rehabilitative steps to alleviate their hearing difficulties. More
questions arise: Why do so many who could benefit from rehabilitation reject or not avail themselves of these services and products? What factors differentiate those who book a hearing test, get their hearing tested, and take subsequent rehabilitative action from those who don’t seek help or who stop short of rehabilitative action? Is it possible that the nature of audiology services today is a factor in rejection and underutilization of services?

It is difficult to reconcile hard-of-hearing persons’ poor involvement with audiolologic services and products with the data on age-related hearing loss, presbycusis. The findings of independent population-based studies of hearing loss among community-dwelling older adults in the United States (Gates, Cooper, Kannel, & Miller, 1990), Europe (Biering-Sørensen, Christensen, Sørensen, & Parving, 1997; Davis, 1989) and Australia (Ward, Lord, Williams, & Anstey, 1993) are similar. Auditory deficits increase markedly with age, beginning as early as one’s thirties (Davis, 1989), and progress over time until there is clinically significant and measurable deterioration in the ability to detect sound (for a review see Willott, 1991). On an audiogram this is noted as a predominantly bilateral, sensorineural, high-frequency hearing loss. Hearing loss has been identified as the third most prevalent chronic disability among older adults, surpassed only by arthritis and hypertension (Binnie, 1994; Haber, 1994). Both the incidence and prevalence of hearing loss increase with age. Plomp (1978) reports that at least 25% of the population at age 65 has a hearing loss sufficient to interfere with communication. Up to 50% of community-based adults aged 75-79 years have some degree of audiometrically measured hearing loss (for reviews see Kricos & Lesner, 1995; Willott, 1991). For the population living in long-term care facilities, this percentage is much higher (Hoek, Paccioretti, Pichora-Fuller, McDonald, & Shyng, 1997; Hull & Griffin, 1989; Schow & Nerbonne, 1980; Shultz & Mowry, 1995). The societal impact of presbycusis will increase in the years to come, because older adults are the fastest growing segment of society and life expectancy

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1 An audiogram is a graph that plots hearing threshold for pure tones across frequencies (typically 250 Hz through 8000 Hz) for each ear.
continues to increase. Thus, the significance of presbycusis as an escalating population health issue is well documented.

Presbycusis is broadly attributed to peripheral auditory dysfunction, such as hair cell degeneration within the inner ear, and/or central dysfunction, associated with decline in structures above the level of the auditory nerve. Deteriorating auditory function may be the result of biological changes in cells, vascular degeneration, and/or other environmental insults accrued as normal sequelae to the aging process (Willott, 1991). Such changes ultimately affect an older person’s ability to process auditory stimuli, most importantly speech. Frequency discrimination is poorer in older listeners, as is the ability to process sound binaurally (i.e., listening with both ears to the same or different stimuli). There is a reduced ability to differentiate the spectral components of a complex sound and to filter out background noise. All these effects may be subtle when considered in isolation but substantial when considered together, especially in difficult listening situations (Schneider, 1997; Willott, 1991).

Many deleterious changes occur within the aging auditory system, even in the absence of any measurable elevation of pure tone thresholds. Measures of hearing sensitivity, such as the audiogram, provide a poor measure of impairment because there can be substantial histopathological change in the auditory periphery without corresponding elevation of pure-tone thresholds. It is also important to keep in mind that, while presbycusis refers to auditory system dysfunction, deficits in the ability of older persons to process auditory stimuli, especially speech, may result from deficits in cognitive, psycholinguistic, and other central processing systems in addition to auditory system deficits (for a review, see Pichora-Fuller, 1997).

The impairment of presbycusis briefly outlined above carries with it wide-ranging adverse effects on the physical, cognitive, emotional, behavioural, and social function of older adults (Mulrow et al., 1990; Rousey, 1976; Thomas & Gilhome Herbst, 1980a). Moreover, the importance of hearing in effective communication means that the

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2 In Canada, 21.8% of the population in 2031 is expected to be aged 65 and over, compared with 10.6% in 1991 (Statistics Canada, 1992a). In the year 2000 in British Columbia, one in eight persons is 65 years of age or older (Government of British Columbia, 1993).
detrimental effects of hearing loss are not restricted to the hard-of-hearing person but extend to communication partners (Hétu, Jones, & Getty, 1993). Older women with hearing loss may be particularly disadvantaged due to the centrality of communication in women's social roles and the multiplicity of their roles at home and in the community (Baruch, Biener, & Barnett, 1987).

Hearing aids are the cornerstone of audiologic rehabilitation. Few who have a hearing aid, however, find that it overcomes all their hearing problems (Holmes, 1995). More than half who are fitted with aids abandon or greatly limit their use a short time thereafter (Hickson, Hamilton, & Orange, 1986). Nevertheless, much research is devoted to improving hearing instrument technology, under the assumption that if only the amplified signal can be improved sufficiently, hearing instruments will be embraced by currently dissatisfied users as well as by the vast untapped market that could benefit from amplification but have never tried it. Statistics spanning many decades and from many countries, however, consistently indicate that only 10% to 20% of those who may benefit from hearing instruments make use of them, despite the deleterious psychosocial effects noted above (Davis, 1989; Gabbard, 1994; Gates et al., 1990; Jones, Victor, & Vetter, 1984; Kochkin, 1999; Liston, Solomon, & Bannerjee, 1995; Ward et al., 1993).

Relatively little research effort has been expended to investigate non-auditory and non-instrumental factors behind the delay in help-seeking and the poor adoption of rehabilitative solutions by hard-of-hearing persons. A strong point is made by Ross (1997) and Erber, Lamb, and Lind, (1996), who state that the future success of rehabilitative audiology lies not only in greater advances in hearing aid technology, but in greater attention to the social, psychological, and environmental factors associated with hearing loss. Attention to these factors forms the basis of an ecological model of practice and research in audiology, the features of which will be described in this and the next chapter.

The consequences of the impairment of presbycusis for the activities and participation of older adults in everyday life may be modulated by many factors, including such social, psychological, environmental, as well as physiological factors. These may include the specific nature of the person's hearing-related impairment (e.g., the specific frequencies affected or the degree of central auditory deficit), and impairments in other
areas such as vision or cognition, particularly in relation to aging (Lawton & Nehemow, 1973; Schneider & Pichora-Fuller, 2000). Personal factors such as one’s health beliefs and behaviours related to health (e.g., Maiman & Becker, 1974) and coping (Folkman & Lazarus, 1980) play a role, as does the social environment, particularly as it influences interpersonal communication (Ryan, Giles, Bartolucci, & Henwood, 1986), and the personal, social, and communication goals of the hard-of-hearing person (Goffman, 1963; Jaworski & Stephens, 1998; Pichora-Fuller, Johnson, & Roodenburg, 1998). If we are to better understand why help from hearing professionals is not sought or is delayed, we need to explore these diverse factors and their influence on hard-of-hearing persons’ perceptions of their hearing problems and their choices of remedial actions. As the above list shows, our exploration must be interdisciplinary, since we have much to learn from the intersection of audiology with other fields: social psychology, cognitive psychology, gerontology, communication theory, and health promotion, to name a few. A review of the literature on help-seeking for other health conditions may also be useful to discover if hearing loss is unique among health conditions in how help-seeking is delayed or avoided.

We also need to examine the role that audiologists and the current culture of audiology and general health service delivery play in delaying or facilitating help-seeking. There is evidence that negative or resigned attitudes of physicians toward hearing loss pose barriers to help-seeking in many cultures (Brink et al., 1996; Gilhome Herbst, Meredith, & Stephens, 1991; Swan & Gatehouse, 1990). There has been little research, however, exploring how the system of audiologic service delivery and the audiologist-patient interaction may facilitate or hinder the rehabilitative process, even after the first help-seeking visit to an audiologist. Are audiologists and the audiology service delivery system implicated in patients’ rejection of rehabilitative recommendations, or in the fact that other rehabilitative aids, such as assistive listening devices (ALDs) and communication strategies training have adoption rates even lower than that of hearing aids (Kochkin, 2000; McCormick, Pichora-Fuller, Paccioretti, & Lamb, 1994; Unger, 1994)? Consideration must be given to how a system (as practised in many jurisdictions of the United States and Canada) that ties payment solely to the hearing aid product rather than overall service may influence the rehabilitative process. Research has shown that hearing
aid use is significantly increased where a comprehensive rehabilitation program accompanies the hearing aid fitting. For example, Brooks (1979) found in Britain that the introduction of a counselling program increased the regular use of aids from 17% to 33%. Similar positive effects of rehabilitative and ongoing audiological support on the use of hearing aids and assistive listening devices have been noted in other cultures (e.g., in Sweden; Andersson, Melin, Scott, & Lindberg, 1994) and in specific populations, such as residents of long-term care facilities (Lewsen & Cashman, 1997).

Few studies have specifically explored help-seeking for hearing loss. Most of these studies have been population based (e.g., all patients attending a large medical clinic) and have focused on auditory factors associated with help-seeking, using questionnaires and audiometric measures of hearing impairment and disability to assess determinants of help-seeking (Brink et al., 1996; Gilhome Herbst et al., 1991; O'Mahoney, Stephens, & Cadge, 1996; Swan & Gatehouse, 1990). None of these population-based studies explored the role that the audiologist and audiology system may have played in patients' help-seeking or hearing health service utilization.

A different research tack was taken by Getty, Gagné, and McDuff (1996), who undertook a qualitative study of the obstacles to seeking help for hearing loss by conducting focus groups with twenty-four older community-based men and women who had already sought help from an audiologist. This study, while exploratory, discovered a wide range of factors from the personal (e.g., resistance to change) to societal (e.g., complicated referral process to get a hearing aid) that delayed or facilitated help-seeking for hearing loss. Their study illustrates the value of qualitative methodology to help elucidate the subtle but important contextual factors involved in social processes. These factors are given opportunity to emerge in the more open-ended and free-ranging exploration that is a feature of qualitative research. This approach was adopted in the research for the present dissertation.
The Purpose of this Study

This study explored the perspectives of older women on their hearing, hearing problems and help-seeking for hearing problems around the time of their first audiology assessment. A major goal of this research was to construct substantive theory, through the use of qualitative grounded theory methodology, linking individuals' experiences living with a hearing loss with the process of help-seeking. A related goal was to examine how these experiences and the help-seeking process may influence and be influenced by the interaction of help-seekers with audiologists. In essence, this study was an in-depth exploration of the question “What brings you here today?” expanded beyond the clinical context and placed in a research context. The results of this exploration may have significance beyond the field of audiology, having application to the more general study of help-seeking for health conditions in aging.

Rationale for this Study

This research was inspired by a desire to learn more about what prompts persons with hearing problems to seek help from audiologists or inhibits them from doing so. The small number of studies to date on help-seeking for hearing loss have been primarily quantitative, procuring data from large samples using questionnaires that are short, closed ended, and designed from the perspective of the researcher, who may make assumptions about how help-seeking “should” proceed. These studies have explored help-seeking only retrospectively, subject to greater influence of recall bias than a prospective study. Also, most studies of help-seeking for hearing loss have articulated the role that family members may play in influencing help-seeking without collecting data directly from these important family members. Furthermore, I am aware of no studies that have considered the influence of audiologists and the system of hearing health care delivery in facilitating or delaying help-seeking for hearing loss and subsequent rehabilitative action or inaction. The interaction of patient and audiologist is an important dynamic that has not been examined. In short, the research on help-seeking to date has not been centred on the experience and
perspective of the person with hearing problems. This research has not given hard-of-hearing persons the space and time to voice their stories about how they perceive hearing problems, the help-seeking process, and the audiology system that provides services and products.

The current study attempted to address some of these shortcomings by adopting a qualitative research design whose primary source of data was a series of individual in-depth interviews with women. The research design was unique in three respects. First, data were collected at several points encompassing a period of time both before and after each participant's first audiology appointment. In contrast to previous retrospective studies, the present study afforded a novel prospective perspective into how hearing loss is experienced and the factors that may influence help-seeking around the time when help is sought. Second, data were collected not only from the participants with hearing problems, but also from a close family member and from the audiologist who assessed each participant, resulting in unique combinations of perspectives on some of the study questions. Third, the inclusion of the audiologic appointment as an important component of the data collection provided important information on the clinician-patient interaction in a typical clinical context. These unique aspects of research design highlight how the research questions were investigated within an ecological and patient-centred research paradigm. This approach considered the dynamic nature of hearing loss, how it may evolve over time, and how it may be influenced by many contextual factors, both personal and environmental.

This study restricted its sample to older women for four reasons. First, few studies have concentrated on women with hearing loss, especially older (retired) women. Second, those studies that have looked at women (usually with men included in the sample) have suggested that there are significant differences in the way that the impairment, disability, and handicap of hearing loss affect men and women, and differences in the way that men and women deal with those effects (Garstecki & Erler, 1995). Women even appear to differ in the words they use to describe the effects of hearing loss in their everyday lives (Waridel, 1995), a finding that may be of particular significance in qualitative studies, where the data consist largely of the words of participants. Women were chosen
exclusively to avoid the potential confound of gender in these areas. Third, studying presbycusis in older women largely avoids the potentially confounding effects of noise-induced hearing loss, which is present in a significant percentage of older men. Finally, the fact that older women outnumber, and will increasingly outnumber, older men calls for more research to discover how the needs of this expanding cohort may be better met.

Summary

It is recognized among audiologists that audiologic rehabilitative services are underutilized. Many people who have a hearing loss do not seek help from audiologists. Many who access services wait many years before doing so. Many who finally seek help do not take further rehabilitative action once their hearing is tested. This brings up many questions about the nature of help-seeking for hearing loss.

Most studies of help-seeking for hearing loss to date have been population-based, using primarily quantitative measures that have focused on auditory factors associated with help-seeking. In contrast, qualitative studies have shown promise to elucidate important and overlooked psychosocial and environmental determinants of help-seeking. The most productive general area for future research on help-seeking for hearing loss is an ecological approach to explore such psychosocial and environmental factors in-depth, centred on the perspectives of hard-of-hearing individuals.

The goal of the current qualitative study was to link the experience of individuals living with presbycusis with help-seeking by focusing on the perspectives of older women regarding their hearing, hearing problems, help-seeking, and interaction with audiology services.

The next chapter undertakes a more thorough review of the literature pertinent to this research goal.
CHAPTER 2
LITERATURE REVIEW

Overview

The purpose of this chapter is to review and synthesize the literature important to the research topic by exploring two major substantive areas: hearing loss (particularly presbycusis) and help-seeking. Throughout the discussion in this chapter, the case is made for conceptualizing hearing loss, help-seeking, and practice and research in audiology within an ecological approach or framework. The chapter begins by defining what is meant by an ecological approach and giving an example of an influential ecological health model.

The review of the literature on hearing loss provides a description of what is known about hearing loss, particularly in terms of its psychosocial impact on hard-of-hearing individuals and their significant others. This leads to discussion of the range of responses of individuals to the impact of hearing loss, and an examination of coping theory and the role of coping in adjustment to hearing loss. There is discussion of the influence of gender and aging on how hearing loss is experienced and handled. A review of theories and models pertinent to age-related communication completes this section.

The discussion then turns to the central research topic of help-seeking, which is conceptualized as one form of coping. The literature on factors and issues that affect help-seeking is first reviewed. This literature falls into two categories: theories of health behaviour derived primarily from social and cognitive psychology, and theories drawing from epidemiological and health education studies of health services utilization. Studies of help-seeking and oral health among older adults are then considered for their ability to
shed light on factors that affect help-seeking for another condition that parallels presbycusis in many of its characteristics.¹

Having moved from the broad to the specific in the exploration of studies on help-seeking, investigations of help-seeking specific to hearing loss are then considered. The final area of discussion is the role that the system of health service delivery and the interaction between clinician and patient² may play to promote or delay the help-seeking process.

This chapter aims to weave together the strands of knowledge in all these areas to form a composite picture of what is known, and what remains unknown, about help-seeking for hearing loss. With this canvas as a backdrop, the chapter closes with a review/revisiting of the research questions.

An Ecological Framework

"Ecology" refers to the study of natural systems, emphasizing the interdependence of one element in a system upon every other element (Lawton & Nahemow, 1973). The word ecology derives from the Greek word "oikos", meaning house or habitation. Although people are more familiar with the term ecology in relation to its biological roots in the study of plant and animal systems, the features of ecological systems can be applied as well to complex human systems.

Each individual, organism, or element in an ecological system (eco-system), has an optimal or preferred environment where its living conditions are in balance, that is, are most suitable and sustainable.³ Environment encompasses all external forces to which organisms are actually or potentially responsive (Stokols, 1977). The eco-system, and

¹ I explored much of this literature on theories and models of help-seeking, and on help-seeking for oral health only after the analysis of my research data was complete. Thus, the review of the literature served not as an influence in my analysis, but as a reference base to which I compared the analysis of my findings. This approach is in keeping with grounded theory, which aims for discovery through the data, without too much bias introduced by total immersion in the literature at the outset of data collection.
² The term ‘patient’ is preferred over ‘client’: the word ‘patient’ derives from the Latin word patiens, meaning “to suffer”, and from the Latin words paene, meaning “almost”, and penuria, “need”. People seek help because they have need, are suffering, and wish to move toward wholeness (Miller & Crabtree, 1994).
³ What Borg (1998) refers to as one’s “preferendum”.
individual elements that constitute it, are subjected to disturbances that tend to force it away from this balance. Balance may be regained by either altering the environment to the preferences of the individual, or the individual may adapt or acclimatize to the new environment, or both may change to some degree. Behaviour is characterized as those responses made by individuals that either promote or impair their survival (or the restoration of balance) in the face of environmental fluctuations (Stokols, 1977).

Ecological paradigms have developed in disciplines as diverse as sociology, education, human geography, economics, public health, and psychology (Green, Richard, & Potvin, 1996; Stokols, 1992). Within psychology, the analysis of environment-behaviour relationships has evolved from traditions such as behaviourism (e.g., Watson, 1913; Skinner, 1953). Many theories and models have contributed perspectives on the functional significance of the environment and its impact on behaviour, for example, conceptualizing this relationship as being mediated largely by cognitive processes (social learning theory) (e.g., Bandura, 1969), as focusing on the role of personality attributes (Murray, 1938), or, from the interactionist perspective, as emphasizing the importance of the subjective or perceived environment (dependent on both external cues and individualized cognitive strategies) as a determinant of behaviour (field theory) (Lewin, 1935).

Ecological psychology (Barker, 1968) has focused on the collective processes by which groups adapt to the environment, while the field of environmental psychology (Proshansky, Ittelson, & Rivlin, 1970) places more emphasis on intrapersonal processes, such as perception, cognition, and learning. Investigations into the effects of such stressors as noise (Glass & Singer, 1974) and crowding (Stokols, Rall, Pinner, & Schopler, 1974) on the behaviour of individuals and groups are examples of topics in environmental psychology. The field of social ecology has subsumed these two fields, conceptualizing behaviour as a joint product of intrapersonal processes (physiological and psychological) and environmental dimensions at the social, physical, institutional, and cultural levels (Stokols, 1977; 1992).
Linking Concepts in Social Ecology with Core Assumptions in Health

This kernel of the history of ecological concepts in psychology is provided to introduce an ecological framework of health and health promotion that links the concepts of social ecology to core assumptions about the dynamics of human health and strategies to promote health (Stokols, 1992), both in terms of individual wellness and collective well-being (World Health Organization, 1984). These linkages are outlined below.

First, in a social ecological paradigm, the well-being of participants in any situation is assumed to be influenced by multiple facets of both the physical environment (e.g., geography, architecture, and technology) and the social environment (e.g., culture, economics and politics). Moreover, the health status of individuals and groups is influenced by a variety of personal attributes, including genetic heritage, psychological dispositions, and behavioural patterns. Table 2.1, (from Stokols, 1992), lists several categories of personal and environmental factors that play either an etiologic or moderating role in human health.

Second, analyses of health and health promotion should address the multidimensional and complex nature of human environments and individuals’ relationships with them. For example, Stokols (1992) outlines how individuals’ physical and emotional well-being are enhanced by environments that are predictable and controllable by the person while at the same time being novel and challenging.

Third, like environments, the participants therein can be studied at varying levels (ranging from individuals, small groups, and organizations, to populations), and with diverse methodologies (e.g., questionnaires, observations, interviews, epidemiologic analyses). Moreover, as Stokols states: “the social ecological perspective assumes that the effectiveness of health-promotion programs can be enhanced significantly through the coordination of individuals and groups acting at different levels, such as family members who make efforts to improve their health practices, corporate managers who shape organizational health policies, and public health officials who supervise community health services.” (1992, p.7)
### Table 2.1

#### Personal and Environmental Factors in Health and Illness (from Stokols, 1992, p. 13)

<table>
<thead>
<tr>
<th>Biogenetic</th>
<th>Psychological</th>
<th>Behavioural</th>
<th>Geographic</th>
<th>Architectural / Technological</th>
<th>Sociocultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family history of illness</td>
<td>Sense of coherence</td>
<td>Dietary regimens</td>
<td>Climatic and geologic risks (e.g., floods, earthquakes, hurricanes, draught)</td>
<td>Injury-resistant architecture</td>
<td>Socioeconomic status</td>
</tr>
<tr>
<td>Exposure to infectious pathogens (e.g., viruses)</td>
<td>Psychological hardiness</td>
<td>Alcohol consumption</td>
<td>Ground-water contamination</td>
<td>Non-toxic construction materials in buildings</td>
<td>Social support vs social isolation</td>
</tr>
<tr>
<td>Immunologic competence</td>
<td>Self-esteem</td>
<td>Smoking</td>
<td>Radon contamination of soil</td>
<td>Ergonomic design of work areas and other environmental settings</td>
<td>Social climate in families and institutions</td>
</tr>
<tr>
<td>Inoculation and medication history</td>
<td>Creativity</td>
<td>Exercise patterns</td>
<td>Ultraviolet radiation</td>
<td>Environmental aesthetics</td>
<td>Modeling and conformity processes</td>
</tr>
<tr>
<td>Congenital disability</td>
<td>Optimism</td>
<td>Sleep patterns</td>
<td>Atmospheric ozone depletion</td>
<td>Indoor and outdoor air pollution (e.g., “sick building syndrome”)</td>
<td>Cultural and religious beliefs and practices</td>
</tr>
<tr>
<td>Disabling injuries</td>
<td>Pessimistic explanatory style</td>
<td>Safety practices (e.g., use of safety belts, bicycle helmets, safe sexual and prenatal behaviours)</td>
<td>Global warming</td>
<td>Effective design of health care facilities</td>
<td>Organizational or political instability</td>
</tr>
<tr>
<td>Cardiovascular reactivity</td>
<td>Health locus of control</td>
<td>Participation in health promotion programs</td>
<td>Health consequences of reduced biodiversity</td>
<td>Vehicular and passenger safety</td>
<td>Economic changes (e.g., job loss)</td>
</tr>
<tr>
<td>Chronological age</td>
<td>Interpersonal skills</td>
<td>Compliance with prescribed medical regimens</td>
<td>Restorative potential of wilderness and other natural environments</td>
<td>Noise pollution</td>
<td>Health media &amp; communications</td>
</tr>
<tr>
<td>Developmental stage</td>
<td>Extroversion</td>
<td>Use of community health services</td>
<td>Water quality and treatment systems</td>
<td>Electromagnetic radiation</td>
<td>Health promotion programs in organizations and communities</td>
</tr>
<tr>
<td>Gender</td>
<td>Coronary-prone (Type A) orientation</td>
<td>Health-relevant decisions and actions made on behalf of others</td>
<td>Solid waste treatment and sanitation systems</td>
<td>Water quality and treatment systems</td>
<td>Health-promotive legislation</td>
</tr>
<tr>
<td>Depression/anxiety</td>
<td>Cancer-prone (Type C) orientation</td>
<td>Hostility/suspiciousness</td>
<td>Availability of health insurance and community health services</td>
<td>Environmentally protective regulations</td>
<td>Environmentally protective regulations</td>
</tr>
<tr>
<td>Hostility/suspiciousness</td>
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</tbody>
</table>
One illustration of an ecological framework whose development was spearheaded by an influential coordinating body is the World Health Organization's (WHO) ICIDH-2, the International Classification of Functioning and Disability (ICIDH-2, 1999).

Example of an Ecological Framework: The ICIDH-2

The WHO's International Classification of Functioning and Disability (ICIDH-2, 1999) has heightened recognition of the importance of an ecological approach to the study of health conditions and determinants. In 1980, the WHO introduced the International Classification of Impairments, Disabilities and Handicaps (ICIDH). This classification system defined “impairment” as a physical, physiological, or anatomical loss or abnormality of function, “disability” as the loss or reduction of normal ability resulting from impairment, and “handicap” as the detrimental effect that disability has on an individual's life, especially on the activities and roles he or she normally performs. The ICIDH-2 has recently recast this trio of concepts to encompass the range of function, not just dys-function, associated with health conditions.

The impairment dimension has been expanded to include body functions, the physiological or psychological functions of body systems and structures, and the anatomical parts of the body, in addition to impairment. The disability dimension has been renamed the activity/activity limitations dimension. Activity is defined as the performance of a task or action by an individual; activity limitations are difficulties an individual may have in the performance of activities. Note that this dimension is defined at the level of the individual and is based on the actual performance of activities (rather than what a person could, or might, do). The handicap dimension has been recast as the participation/participation restrictions dimension. Participation refers to an individual’s involvement in life situations in relation to her/his health conditions, body functions and structures, activities, and contextual factors. Participation restrictions are problems an individual may have in the manner or extent of involvement in life situations. These three dimensions are thus organized at the body, individual, and societal level.
In contrast to the ICIDH (1980) model, in which impairment resulted in disability, which in turn resulted in handicap, the ICIDH-2 model conceives of functioning and disability as a dynamic interaction between health conditions and contextual factors. A problem may exist at one level without necessarily involving the other levels; for example, an individual may have participation problems due to a stigmatizing attitude by society that persists even after the individual has recovered from the impairment or activity limitations associated with mental illness. Contextual factors represent the complete background of an individual's life and living, and consist of both personal and environmental factors. Personal factors include gender, age, other health conditions, coping styles, social background, education, and other conditions that influence how an impairment is experienced by an individual. Environmental factors range from physical factors such as climate and terrain to social attitudes, institutions, and laws. Contextual factors may pose barriers or act as facilitators to activities and participation. The dimensions of ICIDH-2 and their interaction are schematized in Fig. 2.1.

![Figure 2.1](#)

**Figure 2.1**

*Model of the ICIDH-2 (ICIDH-2, 1999, section 5.1)*
The ICIDH-2 reflects the WHO Constitution’s broad conception of health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (ICIDH-2, 1999, section 4.3.8). The ICIDH-2 represents a biopsychosocial model that attempts to integrate the medical model of disability with the social model of disability. The medical model views disability as a personal problem requiring treatment that is aimed at a cure or the individual’s adjustment and behaviour change. The social model of disability, on the other hand, views disability as a socially-created problem rather than an attribute of the individual, with the solution hinging on the collective responsibility of society at large to make the environmental modifications necessary for the full participation of people with disabilities in all areas of social life. In summary, the ICIDH-2 acknowledges that functioning happens at the level of the “whole person” and is the product of an interaction between one’s physical or mental condition and the social and physical environment. It also emphasizes the crucial role that context plays in influencing an individual’s activities and participation in everyday life.

In summary, at the hub of an ecological approach to the study and promotion of health and healthy social systems is an appreciation of the dynamic interdependence between organism and environment. This fundamental principle demands that health and health conditions not be compartmentalized: the health of an individual (or community) must be considered in the context of the environment in which it lives and with which it interacts. With the foregoing discussion in mind, let us now consider the health condition of hearing loss within an ecological framework that moves beyond impairment to consider psychosocial impact on activities and participation in everyday life.
Hearing Loss

The Psychosocial Impact of Hearing Loss

Chapter 1 outlined the characteristics and consequences of the impairment of presbycusis and highlighted the growing importance of presbycusis as a population health concern. The study of the impairment of presbycusis is more straightforward than the study of its psychosocial impact. This is because the multidimensional effects of hearing loss span many facets of everyday living and may be modulated by many factors unique to each individual. Let us now turn our attention to the non-auditory consequences of hearing loss in daily life, the psychological and social manifestations of reduced hearing ability. In ICIDH-2 terms, we will now consider the impact of the impairment of hearing loss on the activities and participation of the hard-of-hearing person at the level of the individual. Following this will be an exploration of the effects of hearing loss on family relationships, stigma and the attitudes of others toward hard-of-hearing persons, effects related to communication styles, and the effect of gender on how hearing loss is experienced. The section concludes by reviewing how the individual responds in terms of coping and identity.

Effects at the Level of the Individual

Forty years ago, Ramsdell (1960) made an important contribution to the psychology of hearing and hearing loss when he proposed that sound has at least three levels of meaning. First, there is a social level, at which sound is utilized in verbal language to convey meaning and relate to others. Second, there is a signal or warning level, at which an outside stimulus such as a siren relays the need for action or response. The third level of meaning is the most fundamental level of awareness, a so-called "primitive" level at which sound endows the human being with a sense of the "aliveness" of the world around him/her.

Today, Ramsdell’s three levels of sound meaning are encompassed in the term “soundscape”. A soundscape is “an environment of sound with emphasis on the way it is
perceived and understood by the individual, or by society. It thus depends on the relationship between the individual and any such environment.” (Truax, 1978, p.126). To some degree, the extent to which Ramsdell’s levels of meaning, or one’s soundscape as described by Truax, is disrupted by hearing loss depends on the severity of one’s impairment. A person with a profound hearing loss, for example, can be expected to experience disruption at all three levels of sound meaning, or to have an extremely limited soundscape. Beyond such gross distinctions in the function of sound, however, an individual’s audiogram, as one measure of impairment, cannot predict the psychosocial effects of hearing loss (e.g., Erdman & Demorest, 1998b). The impact of hearing loss on the meanings of sound depends to a great extent on the individual’s life context.  

The psychosocial effects associated with presbycusis are well documented, but their pattern of expression is highly individualistic. Four reasons why their effects may be highly individualistic are elaborated as follows. First, as mentioned in Chapter 1, presbycusis is characterized by insidious onset and progression of hearing loss in both ears. Ongoing adaptation to tiny increments in hearing loss may prevent recognition of the problem, especially as there is usually no comparative loss between ears to notice. As a result, presbycusis is a greater challenge to study than acute health problems (such as a heart attack) which are characterized by better-defined symptoms of more dramatic onset (such as severe pain). Presbycusis parallels other chronic conditions associated with aging, such as arthritis, in that symptoms may be easily incorporated into some general framework explained away by the fact that one is “just getting old” (e.g., the aches and pains of arthritis) (Zola, 1986). Second, because presbycusis by definition is tied to the aging process, the psychosocial effects of presbycusis are influenced by a myriad of factors associated with aging and life experience. These include physiological changes, such as those incurred as a result of cumulative exposure to harmful noise levels, and psychological changes, such as may accompany altered occupational and family roles.

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4 This notion of the soundscape introduces the concept of acoustic, or auditory, ecology, which refers to the interaction of listeners with their sound environment. Acoustic ecology includes the range and type of acoustic environments with which the listener/communicator interacts, with an emphasis on relationships one has with sound, and on the basis of sound, including the meaning and importance of soundscape components to the listener (Truax, 1978).
Third, because, presbycusis, like other forms of hearing loss, exerts its main effects on social interaction through communication, the effects of hearing loss are not restricted to the person with the impairment but affect and are affected by communication partners. Finally, related to the above three points, it is important to remember that the processes involved in aging and presbycusis are dynamic processes that evolve over time. In summary, one's experience of presbycusis is shaped by many influences over many years, leading to a complex but subtle and highly variable interplay of factors that determine the overall psychosocial impact of hearing loss.

Hearing loss leads to adverse effects on the physical, cognitive, emotional, behavioural, and social function of older adults (see Mulrow et al., 1990, for a comprehensive list of studies). Hearing loss has been shown to lead to increased stress levels, anxiety, and social withdrawal. Altered self-concepts manifested in lowered self-esteem, feelings of inferiority, insecurity, and loss of autonomy may ensue (Rousey, 1976). In a study by Thomas and Gilhome Herbst (1980a), several factors were identified that significantly differentiated hearing-impaired from normal-hearing older adults. Those with hearing loss rated their health to be poorer, were less likely to be able to get out without help, ventured out less far, were less satisfied with their extent of mobility, reported having fewer friends than in the past, reported less enjoyment from life than previously, and were more likely to be rated as depressed.

Uhlmann, Larsen, Rees, Koepsell, and Duckert (1989) discovered a significant association between hearing loss and cognitive dysfunction in patients with Alzheimer's disease. Careful not to presume a cause and effect relationship between hearing loss and Alzheimer's, Uhlmann and colleagues concluded that hearing impairment may be an important risk factor for presenting Alzheimer-like conditions in terms of cognitive dysfunction. Indeed, some apparent cognitive deficits have now been shown to arise from perceptual deficits in vision and hearing (Schneider & Pichora-Fuller, 2000). Such findings highlight the potential wide-ranging secondary effects of hearing loss in terms of functional health status, in addition to the more intangible effects of hearing loss on quality of life.
Effects on Family Relationships

Regardless of the age of the hard-of-hearing person, the interactive nature of communication means that the detrimental effects of hearing loss are not restricted to the hard-of-hearing person but extend to her/his communication partners. Hetu, Jones, and Getty (1993) provide a comprehensive discussion of this topic, by reviewing the limited number of studies of the impact of acquired hearing loss on the relationships of middle-aged and older adults. Intimate relationships, such as those with a spouse or other family member within the same household, are very vulnerable to the effects of hearing impairment. An unimpaired partner may share parallel handicaps with a hard-of-hearing kin in terms of stress, isolation, negative self-image, and difficulties in family interaction. Within the home, family members of hard-of-hearing persons report problems associated with communication, such as irritation at having to repeat comments or having to tolerate the loud volume of the television. Extra effort is involved where the unimpaired family member must assume added responsibilities such as always answering the telephone. Feelings of isolation and negative self-image arise from reduced communication, especially intimate conversation, among all family members.

Interactions between family members are also strained outside the home. There is the effort of and irritation at having to act as interpreter for the hard-of-hearing person. A spouse may harbour resentment arising from restrictions imposed on a couple's social life where the hard-of-hearing spouse avoids social encounters such as parties or leaves early due to fatigue. A normal-hearing family member's own self-image may be undermined by a spouse or parent's inappropriate communication behaviours, such as speaking in too loud a voice or interrupting conversation to talk on an unrelated topic.

Hetu et al. (1993) point out that with progressive acquired hearing loss, coping with and adjusting to hearing difficulties is a process that family members are engaged in with the hearing impaired spouse or parent even before a clear awareness of the impairment and its consequences emerges. However, while the problem of hearing loss is shared among family members, usually the potential solutions are not. The adjustments that family members make are commonly not openly discussed, negotiated or
acknowledged (Hétu, Lalonde, & Getty, 1987). As a result, efforts to improve communication often do not solve problems but may actually lead to greater feelings of misunderstanding and isolation within the family, manifested in part by both reduced frequency and reduced content of communicative interaction. For example, the hearing-impaired person may raise the television volume, and the irritated partner may tolerate it or ask repeatedly for it to be turned down. One or the other person may end up abandoning the listening activity because a satisfactory solution for both parties is never found. This example highlights how coping styles and strategies are dependent on the effects due to the nature of the interpersonal interactions among communication partners, due to factors related to their social roles, and due to their problems concerning shared space.

Concepts from symbolic interaction theory (discussed in more detail in the next chapter) are useful in understanding the complex relationships among factors related to the coping styles and strategies of hard-of-hearing people. According to this theory, persons with hearing loss, like everyone else, are actors who take on different roles in different situations. From interaction to interaction, each person carries a definition of self that is shaped by social and personal experience, as well as the responses of others. Each actor in a social setting creates a “script” in conjunction with other actors, aiming to selectively reveal what each believes is most desireable from one’s definition of self (Goffman, 1959). If this includes concealment of one’s hearing loss in work and social settings, home may be viewed as the “backstage” setting where one may unwind and suspend pretense. It is possible that a controlling, managing role may be adopted with significant others at home (hence, turning the TV volume up), whereas a passive, avoidance role is assumed in the “outside world”. These coping strategies impose changing roles for significant others as well. Outside the home, for example, a family member may be intermediary, protector or interpreter, whereas inside the home he or she may choose to withdraw from interaction with the hard-of-hearing relative. Hallberg and Barrenäs (1993) defined four different

5Television is cited as the most common problem area in several community-based surveys concerning hearing (e.g., Barcham & Stephens, 1980; Stephens, Lewis, Charny, Farrow & Francis, 1990b ), including studies of other cultures (e.g., in Poland; Golabek, Nowakowska, Siwiec, & Stephens, 1989).
approaches of wives toward spouses with occupationally induced hearing loss: pretending there is no problem (co-acting), playing down the problem (minimizing), controlling, steering, or advising the hard-of-hearing person (mediating), and separating themselves from the spouse (distancing).

One cannot easily generalize about the specific effects of hearing loss on intimate relationships; every relationship is unique and dynamic and the effects that emerge are a function of many variables. In addition to the severity of the impairment, it seems likely that specific effects of hearing loss would depend on the length of time family members have shared the hearing problem and their relationship. Other factors that may play a role include the person's ability to adjust, as well as his/her age and lifestyle. The review by Hétu et al. (1993) encompassed studies that looked at families of workers with noise-induced hearing loss as well as retired couples, where, as mentioned earlier, additional factors related to aging seemed to combine with the effects of occupational hearing loss. These factors and their effects are highly individualistic; nevertheless their importance is evident.

Attitudes of Others: Stigma

One's broader social sphere of interaction includes contact with friends, acquaintances, and strangers in a work or community setting. The attitudes of these people and of members of society in general toward hard-of-hearing persons strongly contribute to the psychosocial disadvantages of hearing loss. Much of the work in this area has been undertaken by looking at the attitudes of coworkers of males with occupationally induced hearing loss (Hétu, Getty, Beaudry, & Philibert, 1994; Hétu, Getty, & Waridel, 1994).

By far, the strongest response of those with unimpaired hearing is the stigmatization of the hard-of-hearing person (see Hétu, 1996 for a comprehensive discussion of stigma and hearing loss). Stigma refers to the “discrediting” of an individual as a result of her/his inability or failure to meet the expectations associated with a role in a specified social setting (Goffman, 1963). The spoiled sense of identity that accompanies
stigma is acutely felt by those with disabilities because inappropriate stereotyped responses from others are commonplace (McKellin, 1994; Pettygrove, 1985). Anticipating such stereotypes (e.g., equating hearing loss with impaired cognitive skills), leads to a range of responses by hard-of-hearing persons in their struggle to preserve and present an unstigmatized definition of self. One response may be to conceal one’s hearing loss, which has the unfortunate effect of feeding the stigmatization process when coworkers, for example, make disparaging remarks or jokes about hearing loss in the presence of the hard-of-hearing person (Hétu et al., 1994).

Communication in Aging: Additional Stigmatizing Effects

Older adults, whether or not they have significant hearing loss, may also be stigmatized by the communication style others use with them. Research on communication, especially in inter-group encounters, has shown that people accommodate their manner of talking to each other in a variety of ways. This is the essence of Communication Accommodation Theory (Giles, 1984), which has grown into an interdisciplinary model of the processes that determine how relationships and identity influence and are influenced by communicative interaction. On the one hand, to the extent that a person wishes to gain approval and identify with an interlocutor, he or she will converge his or her speech style to the other person, adjusting it so that it is more similar. On the other hand, speech divergence can communicate in-group identification, dissociation, or power differential. Convergence is the typical pattern. However, in talk with elderly persons, convergence may not be toward the older person’s actual competence but toward a stereotypical societal view of old age as a time of dependence and sharply declining abilities. Health care providers, for example, especially physicians, often use denigrating or patronizing speech styles in talking to elderly patients (Ryan & Butler, 1996). Intergenerational communication studies also reveal negative stereotypes attached to older persons by their younger interlocutors and how these stereotypes alter the way that younger conversation partners interact with older adults (Coupland, Coupland & Giles, 1991).
Ryan, Giles, Bartolucci and Henwood (1986) have coined the term "communication predicament of aging", which refers to situations in which undesirable discrepancies between the actual communicative competence of an elderly person and the negative perception of his or her competence result in inappropriate communication accommodation. Inappropriate accommodation is noted particularly in the language that may be used by caregivers or family members. Inappropriate communication accommodation is epitomized by simplistic "baby talk" characterized by such features as high pitch, exaggerated intonation, and reduced grammatical complexity. Such inappropriate accommodation reflects lowered expectations of communicative competence and conveys a fundamental lack of respect for the older adult, such as is exhibited by patronizing or controlling talk that leads to constrained opportunities for the elder to communicate. An extreme example is the situation in which an older person’s problems are discussed with a third party as if the elder were not present. In response, an older person’s self-perception may erode to match these negative expectations and judgments, rendering them self-fulfilling.

Further support for the role of communication in the social construction of self (another example of symbolic interactionism) comes from a social learning framework provided by Baltes and Wahl (1996). They observed and coded behavioural interaction patterns between older people and their social partners in everyday activities, in both long-term care institutions and private dwellings. Baltes’s model of learned dependency (1988, 1995) sparked interest in exploring the possible consequences of these exchanges on how older people maintain and develop dependent and independent behaviours. Findings showed that the dominant interaction pattern was one in which the dependent behaviours of older people were immediately attended to and given positive reinforcement, whereas independent behaviours were ignored or discouraged, a pattern that Baltes and Wahl labeled the “dependency-support script” coupled with an “independence-ignore script”. This pattern was particularly evident when the older person was engaged in personal care. For example, where a resident tried to put on his shirt (an independent act), a staff member said, “I told you not to dress yourself; you always get it wrong” (a dependence-supportive act). The pattern was apparently replicable in males and females. In response,
older persons generally complied with the expectations of their social partners, reinforcing the pattern of interaction. Similar to Ryan's "communication predicament of aging" model, a downward spiral may ensue, with the older person becoming increasingly less interactive and more dependent upon caregivers.

This reduction in communicative interaction threatens the health of the older adult by threatening his/her autonomy. As well, emotional health, which is important to overall health status, is a function of one's social support as fostered by good communication (Nussbaum, Thompson & Robinson, 1989). The role of communication is not restricted to sharing information or conversational content between parties. This ideational, propositional, or transactional role of communication is important, but communication also serves an equally important relational role (Brown & Yule, 1983). The relational or interactional role is the social role of communication that enables us to establish and maintain relationships with others and that contributes to our sense of identity. Compared to younger adults in the workforce, older persons in their retirement years may attach relatively more importance to the interactional, relational, or social function of communication than to the transactional, ideational information exchange function (e.g., Johnson & Pichora-Fuller, 1994). With increasing age, as one becomes more acutely aware that one's time spent with others is limited, one's emotional needs in conversation take greater precedence (Carstenson, 1996). Communication, therefore, serves an important role in promoting a sense of autonomy and connectedness well into old age.

In addition to the contribution that factors associated with aging may make to the psychosocial impact of hearing loss, there is evidence of differential effects of hearing loss on women compared with men. As the current study involves older women exclusively, let us now consider the literature on gender and hearing loss.
Women versus Men

Research shows that hearing impairment and its effects on activities and participation impact women and men differently. Waridel (1995) studied working women who had occupationally-induced hearing loss. These women reported problems on the job related to their hearing, such as excessive fatigue, stigma reinforced by peers and boss, and a feeling of having to prove one's ability to a greater extent to make up for having a hearing loss. In addition, these women reported feeling very disadvantaged on the home front. At the social 'hub' of the family, nurturing children (and husband) and often acting as spokesperson to the outside world, these women felt they had a more demanding social role than their spouses. Their communication obligations meant that they could not rest from the stress of communicating after a day's work, as their spouses could. A difference in social roles between men and women results in different psychosocial disadvantages associated with hearing loss. Hétu et al. (1993) report that men's traditional role as "breadwinner" leads to concealment of their hearing impairment on the job out of fear of giving an image of being "diminished" or "less manly". Women on the other hand report greater feelings of inadequacy at home than on the job because of the importance they place on their role as 'communicator' to and for their family.

Women's different social roles also encompass multiple roles in society. Much more than men, women simultaneously play the role of parent, spouse, caregiver to a relative or relatives, community member, and employee. Studies of women with multiple roles suggest that they gain both socially and emotionally from complex role responsibility (Baruch, Biener, & Barneff, 1987). To my knowledge, however, no studies have examined how such responsibility may be affected by the stress of communication difficulty arising from hearing loss.

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6 In terms of impairment, women, on average, have poorer low-frequency thresholds (up to 1000 Hz), but better high-frequency thresholds than men (Pearson et al., 1995). This "gender reversal" phenomenon is noted across the life span in studies with older participants (age 50 to 80+) (Jerger, Chmiel, Stach, & Spretnjak, 1993) and in studies with young to old participants (Erdman & Demorest, 1998b). Jerger et al. (1993) suggest that gender differences may be due to variance in noise exposure, the possibility of greater atrophy of the stria vascularis in women, and the possible relationship between cardiovascular disease and hearing loss, particularly among older women.
The two genders also seem to have different coping mechanisms to deal with the effects of hearing loss. There is evidence from population data that women self-rate hearing disabilities as slightly less of a problem than men (e.g., Davis, 1995). Another study indicated that working women with noise-induced hearing loss are more likely than men to try to pass as "normal" hearing (Hallberg & Jansson, 1996). Men, much more than women, impose their needs strongly on the family and come to expect family members to accommodate to their hearing loss (Jones, Kyle & Wood, 1987). Hence, although interpersonal communication is of great importance to women (Garstecki & Erler, 1995; Erdman & Demorest, 1998b), women receive (and may expect?) less social support and understanding on the homefront for their communicative difficulties compared with men (Jones et al., 1987; Waridel, 1995).

Women and men also appear to differ in the words they use to describe the effects of hearing loss in their everyday lives. For example, in Waridel's (1995) study, women spoke of the "pleasure lost" in activities once enjoyed; men in similar qualitative studies never used such a phrase (Getty & Hétu, 1994). These researchers expressed the need for further exploration of gender differences in the psychosocial effects of hearing loss, and a need to relate findings to the broader literature on gender studies and gender and disabilities (Hétu et al., 1993; Garstecki & Erler, 1995; Erdman & Demorest, 1998b).

In summary, the literature on the psychosocial effects of hearing loss provides evidence that the impact of hearing loss is wide-ranging, affecting not only the hard-of-hearing person, but others with whom she/he interacts on both an intimate and casual basis. At the societal level, negative attitudes and behaviours of others (whether they be coworkers, family members or care-givers) toward hard-of-hearing persons may diminish self-esteem and negatively influence self-perception. Such effects are exacerbated for older adults with presbycusis, due to stereotypic negative attitudes toward the aged. Social partners play a critical role in mediating between the experience of hearing loss and the behavioural coping responses of hard-of-hearing persons. It is to these responses that we now turn our attention.
The Individual's Responses to Hearing Loss

It is well acknowledged that psychological factors mediate between the hearing impairment and its effects on activity and participation. It is therefore important to explore the psychological construct of coping and its role in the individual's responses to hearing loss. The above discussion has already made reference to the coping behaviours that hard-of-hearing persons and significant others engage in when responding to the impact of hearing loss in their lives. The construct of coping is discussed further below. Lazarus and Folkman's well-known theory of stress and coping is introduced, and two theories that relate the concept of control with stress and coping (the theory of attentional overload, and the theory of learned helplessness) are also mentioned. This section concludes with a discussion of the role of coping in the preservation of identity and self-image.

The Construct of Coping and Related Theories

Coping theory and research posits that coping processes intervene between stressful events and psychological adaptation or adjustment (Folkman, Lazarus, Gruen, & DeLongis, 1986). Coping has been defined as "cognitive and behavioural efforts to manage (reduce, minimize, master, or tolerate) demands (external or internal) that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984). It is a dynamic process of purposeful efforts focused on the resolution of difficulties that place demands on the organism for adjustment (Zautra & Wrabetz, 1991). Coping has been conceptualized as being either a "trait" that refers to stable properties of a person, or as a "state" that deals with transient reactions that change with circumstances. One may then differentiate between "coping styles" and "coping strategies" to mark this trait-state distinction.

A well-known, ecological\(^\text{7}\) model of stress and coping based on the cognitive theory developed by Lazarus and Folkman (1984) views the person and the environment as being in a dynamic, mutually reciprocal, bidirectional relationship. "Stress" is

\(^\text{7}\) The term "ecological" is not explicitly used by Lazarus and Folkman (1984).
conceptualized as a relationship between the person and the environment that requires constant appraisal. Transactions that are appraised as stressful because they are perceived to pose a threat, challenge or harm to the individual require a coping response. Coping is seen to serve one of two functions: problem-focused coping works to deal with the problem causing distress; emotion-focused coping works to regulate the distress. Problem-focused coping is goal-directed and includes strategies for gathering information, decision-making, planning, and resolving conflicts in order to solve or manage problems that impede or block goals and create distress (Lazarus & Folkman, 1984). Emotion-focused forms of coping include distancing and escape-avoidance responses (Folkman et al., 1986). Studies have shown that people use both forms of coping in virtually every type of stressful encounter (Folkman et al., 1986). Moreover, the coping behaviours used are determined by characteristics of both person and environment (Felton, Revenson, & Hinrichsen, 1984). Coping processes lead to an event outcome that either is a favourable resolution, an unfavourable resolution, or no resolution. Particular emotions are generated throughout the processes of appraisal, coping, and the evaluation of event outcomes. A chronic disability imposes repeated, sometimes unremitting, demands for coping (Lazarus & Folkman, 1984). Distress continues wherever an unfavourable or unresolved event outcome follows a coping response.

Heim (1995) points out that, since an individual's principal aim in coping is to adapt to the new situation resulting from disease (illness), one cannot not cope with illness demands. In Heim's (1995) opinion, “good” coping involves taking an active stand, including tackling issues, seeking information, solving problems, and seeking social support with optimism and confidence; “bad” coping, however, implies a passive ruminating, withdrawn attitude, often with self-accusation or resignation. Heim does point out, however, that the distinction between “good” and “bad” coping depends on the perspective of the observer: what may seem inappropriate to a family member or health professional may seem appropriate to the “coper”. Folkman et al. (1986) caution that it is important not to value a particular form of coping without reference to the context in which it is used. Pettygrove (1985), in relating her personal experience with glossectomy, states that “what appears to be noncompliance or rebellion against treatment may in fact
be an attempt to assert more self-control or to avoid some task that would lower self-esteem" (p.109). In addition, because coping is a process, one's approach to coping is likely to change over time as the demands of the illness and one's reaction to those demands change.

To explore the strategies utilized by hard-of-hearing persons in their adjustment to hearing loss, audiological research has been directed predominantly to the development of scales or self-assessment instruments (discussed more in a later section) (e.g., Andersson, Melin, Lindberg, & Scott, 1995; Demorest & Erdman, 1987). With a few exceptions, however, (e.g., recent research by Stephens, Jaworski, Lewis & Aslan, 1999 on specific communication strategies adopted in specific listening environments) these pencil-and-paper tools have not considered the role that either contextual or underlying psychological factors may play in the individual's choice of particular coping strategies.

In contrast, qualitative research by Hallberg & Carlsson (1991) has looked specifically at the psychological construct of coping in relation to hearing loss. They interviewed middle-aged employed men and women with long-standing hearing loss, some of whom wore hearing aids. They found two major themes related to coping among these participants; persons with acquired hearing loss either opted to “control the social scene” or “avoid the social scene”. They reported that each participant used a variety of strategies, but showed a preference for one of these two management patterns.

“Controlling the social scene” is a pattern characterized by the hard-of-hearing individual actively managing situations and the listening environment and taking responsibility for outcomes. Strategies may include verbal and nonverbal instructions to others to enhance understanding. The need to control the social scene is viewed by Hallberg and Carlsson as an activity comparable with Folkman and Lazarus's (1984) problem-focused coping.

“Avoiding the social scene”, a pattern adopted less often by women than men in their study, includes the strategy of minimizing the hearing loss, for example, by joking about difficulties or by making positive comparisons between the self and others having worse hearing. Nonverbal communication strategies, such as lip-reading and positioning oneself near the talker, may also be utilized to minimize the attention drawn to one's hearing loss. Hallberg and Carlsson (1991) view avoidance of the social scene as partly comparable to
the emotion-focused coping of Folkman and Lazarus (1980). They concluded that both management patterns have a mix of positive and negative personal and psychosocial outcomes. A negative psychosocial outcome may result, for example, when one finds oneself in an uncontrollable situation. As Folkman et al. (1986) state, "people who are repeatedly in uncontrollable situations experience helplessness, become increasingly passive in their coping efforts, and ultimately experience demoralization and depression" (p. 571).

The relationship between perceived control and response to stressors has been the focus of several theories. Two such theories are the theory of attentional overload and the theory of learned helplessness. The theory of attentional overload (Cohen, 1978) posits that uncontrollable or unpredictable stimuli require more extensive monitoring (because of their novelty or complexity) than controllable events. Uncontrollable stimuli are, therefore, more likely to deplete attentional resources and to result in impaired task performance and interpersonal relations. The quotation above (from Folkman et al., 1986, p.571) relates to Seligman’s (1975) theory of learned helplessness that states that, through repeated exposure to uncontrollable events, individuals reduce their attempts to influence the environment because they come to believe that outcomes are independent of their behaviour. This theory has ties to the construct of locus of control (discussed in a later section).

Nevertheless, researchers have paid increasing attention to the link between our well-being and our control over our environment (Stokols, 1985). Stokols (1985) emphasizes the importance of considering the sociophysical context of human stress. As he outlines, the degree of “fit” between person and environment (also termed congruence) in a particular setting depends on perceived controllability and environmental salience. Controllability concerns one’s perceived ability to modify or maintain the environment, or regulate one’s exposure to it, in accordance with personal preference and well-being.

8 Quality of life indicators in aging (Raphael, Renwick, & Brown, 2000) include the element of environmental choice, as well as control, in the definition of a “quality environment”. Choice and control within specific environments contribute to quality of life by enhancing a person’s perceptions concerning her/his decision-making abilities and opportunities (see Pichora-Fuller & Robertson, 1994 for an example of this among hard-of-hearing residents in a long-term care facility).
Environmental salience comprises both motivational salience, which concerns the extent to which one associates settings with psychologically important needs, and perceptual salience, which refers to the degree to which features of the sociophysical environment support or hinder achieving one's goals in that setting. Stress, therefore, and one's response to it, is multidimensional and changes from situation to situation and across time. For example, a hard-of-hearing person's choice of a particular coping strategy to deal with misunderstood conversation at a party is influenced by her recollection of the degree of success or failure experienced previously when that strategy was used in previous comparable situations.

The compensatory coping strategies utilized by older hard-of-hearing persons in conversation change as environmental context changes, and as personal resources change, such as with the decline of hearing and cognitive resources in aging. The meaning of a message in conversation results from the overlap between the content dimension and the relational dimension of communication. In addition to linguistic cues, the relational dimension relies on nonverbal paralinguistic and prosodic cues. These cues include such features as tone of voice, pitch, stress, rhythm, volume, intonation, and rate of speech. These features support and supplement the content dimension of conversation, by relaying information such as the emotional state of a speaker and relaying cues that regulate turn-taking. Villaume, Brown and Darling (1994) suggest that presbycusis involves auditory losses along these two dimensions, content and relational, and suggest that these two dimensions of presbycusis exhibit different patterns of aging. Young-old adults may have fairly severe losses on the content dimension of listening (e.g., reduced ability to identify phonemes), but little loss on the relational dimension (e.g., good ability to use prosody). In contrast, old-old participants (late 70's and 80's) exhibit major losses on both the content and relational dimensions. In terms of coping strategies, young-old adults pay greater attention to paralinguistic cues in conversation to compensate for the content cues they miss. However, as their ability to use paralinguistic cues deteriorates with age, adjusting to a communication partner may become an uncertain process. Such increasingly uncontrollable situations may lead to a shift in conversational style that becomes exaggerated as either more passive or more domineering. Indeed, old-old adults, when
compared to young-old adults in Villaume et al.'s study, exhibited a much more restricted style of conversation. Co-occurring health conditions, such as visual problems (Erber, 1996), exacerbate these effects. Studies such as these highlight how the availability or lack of personal resources in many realms (both physical and psychological) may determine the choice of coping strategies utilized at any one point in time, as well as their evolution over the lifespan. Given the importance of communication in older adulthood and the disadvantageous results of maladaptive behaviours, it is important that older adults utilize effective coping styles and strategies to deal with hearing loss in ways that are consistent with their goals, and that enhance their health and quality of life.

Issues of Identity and Self-image

There is a common theme that runs through the literature on coping: the preservation or continuity of identity and self-image. With regard to the goal of adapting or adjusting to illness or disability, coping cushions the emotional impact of illness or disability and preserves identity. This point has been raised in terms of family relationships and the stigma attached to hearing loss in work or social settings. Hallberg & Jansson (1996) note that:

denial (of hearing loss) or self-deception is interpreted as an attempt to protect the normal identity and to avoid being defined as a deviant in social interactions...
Denial, or self-deception, could also be seen as a coping strategy, aimed at concealing the hearing disability in order to preserve a positive self image. (pp. 340-341)

It has been seen how hearing loss may threaten one’s self-image and identity at every level of interaction, from the personal to the public to the societal. Given the enormous energy many hard-of-hearing persons devote to protecting their “normal” identity, it is curious that issues of identity and self-image have not assumed greater importance in the literature on acquired hearing loss (for exceptions see Getty & Hétu, 1994; Laszlo, 1994; McKellin, 1994). Fortunately, a review of more recent research suggests that this is changing (e.g., Stephens et al., 1999). Unlike the Deaf, with their
strong sense of group identity or culture, there is no recognized homogeneity of experience among hard-of-hearing persons to unite them. Their social experience is diverse, and, although their impairments may be similar, there is not necessarily any outward sign of hearing loss to signal group membership. The notion of shared meaning that is a defining feature of culture is largely lacking, except as it emerges in rehabilitation. We will return to this important point in the discussion of help-seeking.

**Summary of the Literature on Hearing Loss**

The literature reviewed above has illustrated the wide-ranging and highly individualistic impact of hearing loss on the hard-of-hearing person and her/his family members. The stigmatizing attitudes of others toward the hard-of-hearing person may compound the psychosocial disadvantages of hearing loss, particularly as these attitudes are expressed through communication, especially with older adults. There is evidence that hearing loss affects women and men in different ways, and the two genders appear to respond in different ways to these effects. The impact of hearing loss is mediated by one’s responses to hearing loss as influenced by psychological factors, and the construct of coping and related theories can be used to explain the response of the individual to the stress of hearing loss. We have seen that coping really encompasses all the behaviours an organism engages in consciously or subconsciously in response to stress, with the goal of adjusting to that stress.

We move now to consider help-seeking, which may be considered a subset of coping behaviours.

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9 Among many Deaf, a sense of group identity has been developed from an early age through the use of sign language, as well as attendance at residential schools.

10 The term rehabilitation is used in the broadest sense to include not only the services of health professionals but also other sources of help. As such, an important component of the rehabilitative process may involve participation in a self-help group or consumer association such as the Canadian Hard of Hearing Association (CHHA).
Help-seeking

The ecological paradigm introduced at the outset of this chapter identified the link between behaviour and underlying personal psychological factors (see again Table 2.1). This link was underscored in our discussion of coping and theories related to coping and stress. In attempting to better understand the process that leads to the culminating point of booking a hearing test, it is helpful to extend this discussion by examining major psychological theories and conceptual frameworks developed to attempt to explain health behaviour as it might apply to help-seeking. A number of these theories and frameworks will be introduced in this section; however, with a few exceptions (Brink et al., 1996; Hyde & Riko, 1994; McCormick et al., 1994; Noh, Gagné & Kaspar, 1994,) they have not been considered in the audiologic literature in general or in audiologic research on help-seeking in particular.

We begin the discussion with a description of five major social-psychological and cognitive-psychological ideas drawn from the health education and health promotion literature. These are: the Health Belief Model, the concepts of self-efficacy and locus of control, the theory of reasoned action, and the theory of planned behaviour. The Health Belief Model was one of the first models of health behaviour to be developed; the other constructs outlined here have built upon the theories underlying this model. Following this description of personal psychological constructs, an outline of the Andersen-Newman model is presented. This important structural model of health service utilization incorporates personal and environmental factors that are posited to affect the use of health services. As will be highlighted, however, this model has been criticized for its focus on structure and its failure to consider aspects of process that underlie help-seeking and service utilization. Two models that focus on aspects of process in help-seeking: the construct of illness behaviour, and the Common Sense Model, are then presented. One final model presented explores the issue of delay in help-seeking (exploring stages of delay). The review of the theoretical literature on help-seeking concludes with a discussion of the effects of gender and aging on help-seeking.
Theories and Models of Health Behaviour

Health Belief Model

The Health Belief Model attempts to predict health-related behaviour in terms of certain belief patterns. It was developed in the 1950's to explain and predict why people engage or don't engage in specific preventive behaviours, such as participating in tuberculosis screening programs. The model stated that, in order for an individual to take action to avoid a disease, he/she would need to believe that 1) he/she was personally susceptible to that disease (perceived susceptibility), 2) the occurrence of the disease would have at least a moderately severe effect on some component of his/her life (perceived seriousness), and 3) taking a particular action would in fact be beneficial by reducing susceptibility to or the severity of the effects of the condition, and that it would not entail overcoming important social or psychological barriers (perceived benefits of and barriers to taking action, otherwise termed cost-benefit analysis). Furthermore, cues to action were stated to link action to perception. Hence, a “stimulus”, either internal (e.g., perception of bodily states), or external (e.g., interpersonal interactions, mass media communications), was assumed to be necessary to trigger the specific health behaviour (Maiman & Becker, 1974).

Self-efficacy

Self-efficacy is a concept from social learning theory (Bandura, 1977) that has been incorporated into the Health Belief Model (Rosenstock, Strecher, & Becker, 1988). It refers to one's beliefs in one's abilities to mobilize resources both internally and externally to meet situational demands. Self-efficacy incorporates the concept of reciprocal determinism (as opposed to operant conditioning) in that it acknowledges a person's ability to act upon her/his environment as well as to be acted upon by the environment. It is a particularly salient construct because issues of perceptions of self-confidence and control are important in long-term modifications of behaviour, such as behaviours related
to communication and hearing. The kinds of coping strategies one adopts to compensate for hearing-related communication difficulties, for example, will depend in part on one's perceptions of self-efficacy, including one's ability to control environmental factors contributing to communication difficulties. The degree to which professional recommendations regarding rehabilitation are followed may also be influenced by one's perception of one's ability to fulfill such recommendations.

Locus of Control

The concept of control is reflected in psychology's "health locus of control" construct, which refers to the extent to which a person believes her/his health is determined by forces internal or external to the self. Those who believe health is determined by forces such as chance, fate, luck, or powerful others are said to have an "external" locus of control, whereas those who feel that one's own efforts and abilities determine health are said to have an "internal" locus of control (Goldsteen, Counte, & Goldsteen, 1994). Locus of control is closely related to another construct, "mastery", which some view as central among the personal resources which people draw upon in the face of threats posed by events and objects in their environment (Turner, Frankish, & Phillips, 1991). Mastery is seen to be conditioned largely by one's past history of successes and failures in meeting such challenges.

Theory of Reasoned Action

This theory incorporates the concept of behavioural intention, which is felt to be the link between beliefs and behaviours. The theory of reasoned action holds that before an actual behaviour occurs, one must have the intention to carry out the behaviour (Fishbein & Ajzen, 1975). It also specifies that the strength of an individual's intention to carry out a specific behaviour is a function of personal attitudes as well as subjective norms. These attitudes, in turn, are influenced by beliefs concerning the efficacy of action in achieving expected outcomes and by the attitude toward those outcomes.
Theory of Planned Behaviour

The theory of planned behaviour is an extension of the theory of reasoned action that emphasizes the importance of volitional control for predicting behaviour (Ajzen, 1985). It is recognized that actual control is an intangible measure; rather the perception of control is the available measure. Hence, perceived control over a behaviour should be high when an individual perceives few obstacles, internal and external, to performing the behaviour. Perceived control may be based on personal experience or observation of the experience of close other.

Application of Theories to Help-seeking for Hearing Loss

This short synopsis of theories of health behaviour introduces important psychological constructs that have found their way into models of health services utilization. They resonate with some of the findings of research on help-seeking, and in particular, as we shall see, behaviour related to help-seeking for hearing problems. For example, we have noted how presbycusis and its consequences may develop gradually. If an individual is not aware of these subtle changes, her perceptions of susceptibility and severity are likely to be low and help-seeking action is unlikely. If she is frequently in uncontrollable listening situations where her coping strategies are unsuccessful, she may give up trying to understand conversation and withdraw from social interaction (learned helplessness). Additionally, if she has an external locus of control, she may be less likely to seek help because she rationalizes that hearing loss and its effects are outside her control. Moreover, if the costs of taking action are perceived to outweigh the benefits of taking action, action will likely be delayed or avoided. As previously mentioned and discussed further in this chapter, research findings indicate that many costs accompany getting one's hearing tested. There are costs in terms of the stigma associated with revealing one's hearing loss and adopting “hard-of-hearing” as part of one's identity. There is the cost of wearing a hearing aid or using an assistive listening device, not only financial cost, but social cost in terms of the stigma attached to it and the altered “body image” it creates.
(Helman, 1995). The knowledge and skills necessary for the successful use of such devices may seem overwhelming, especially to the elderly, thereby reducing their self-efficacy. The perceived minimal benefits of hearing aids are often based on personal attitudes developed in response to the poor modeling provided by unsuccessful users. Very often, cost exceeds benefit and no action is taken. One can see how these psychological theories resonate with the attitudes, values, belief patterns, and behaviours associated with presbycusis, in terms of actions adopted on a day-to-day basis to deal with hearing challenges, and in terms of seeking help for longer-term solutions, such as considering a hearing aid.

Now we turn to consider one model that has been invoked in numerous studies of help-seeking and health services utilization: the Andersen-Newman Model.

A Model of Health Services Utilization: The Andersen-Newman Model

The psychological constructs described above have found their way into models of health services utilization, underscoring the importance of these constructs in help-seeking and health services utilization. The Andersen-Newman model (Andersen & Newman, 1973) was developed over a number of years based on a series of national surveys in the United States of that population’s use of and expenditures for medical services. This model is helpful in exploring the factors that determine help-seeking behaviour and the use of health services in general.

The Andersen-Newman model views the utilization of health services as a type of individual behaviour, but it also delineates the influences of societal determinants and the health services system itself on individual determinants of utilization. The model characterizes health services utilization into type (e.g., use of hospital, physician, medication), purpose (primary, secondary, tertiary or custodial care), and unit of analysis (which distinguishes between, for example, initial contact with a physician versus number of services received in a given time period). The authors stress the importance of how health service utilization is measured because the components of the model and their relative influence vary considerably, depending on the service under analysis. For example,
factors that influence preventative (primary) care (e.g., annual checkups and immunizations) differ from those related to diagnosis and treatment.

In terms of individual determinants, the model assumes that a sequence of conditions determines whether or not people use services and the volume of services they consume. Use is posited to depend upon: 1) the propensity of an individual to use services as predicted by various predisposing variables, 2) his/her ability to secure services (enabling variables), and 3) his/her illness level.

Predisposing variables are individual characteristics that exist prior to illness. These characteristics include demographic factors such as age, sex, marital status, and past illness; social structural (or status) factors such as education, occupation, and ethnicity; and, beliefs about illness and health care, which encompass knowledge about disease, attitudes toward health services, and values concerning health and illness.

Enabling variables are conditions that permit one to act on a value or satisfy a need regarding a health service. These conditions may reside at the individual or family level in terms of financial resources, whether or not the individual has a regular source of care, and the nature and accessibility of that care. Enabling characteristics of the community that may affect service use include the ratio of health personnel and facilities to the population, the price of health services, and aspects related to geographic region and the rural-urban character of a community.

The third level of determinants affecting an individual’s use of health services is state of illness as self-perceived and also as evaluated by the practitioners who treat the individual. Measures of self-perceived illness include number of disability days experienced during which the individual is unable to do what he/she usually does (analogous to “activity limitation” in the ICIDH-2), and self-report of symptoms. The state of illness evaluated by practitioners is included because, once an individual seeks care by accessing the health care system, the nature and extent of the care received is in large part based on professional evaluation (assessment of symptoms and diagnoses) of the individual.

In addition to the individual determinants of health service use, the model posits that there are two categories of societal determinants of health service utilization:
technology and norms.11 Societal norms reflect legislative components, such as how medical care is financed (which Andersen and Newman postulate is the norm which has the greatest effect on health service utilization), and societal beliefs and homogeneity of values.

The health services system structures the provision of formal health care goods and services in society, and consists of two major dimensions: resources and organization. The resource dimension includes the total volume of labour and capital relative to the population served and the distribution of these resources within a country (or more regionally, within a state or province). Organization refers to access and structure within the health care system. Access specifies the requirements that must be met and the barriers that must be overcome before medical care is received and/or continued; for example, such factors as health care budgets and waiting time affect access. Structure refers to characteristics of the system that determine what happens to the patient following entry into the system; for example, the nature of medical practices of the primary practitioners who first see the patient.12

Of the variables cited in the Andersen-Newman model, research by many investigators has revealed that variables related to needs, estimated by indices of health status, are the most consistent and powerful predictors of utilization (Anderson & Newman, 1973; Wolinsky, 1978; Mutran & Ferraro, 1988; Strain, 1991) These indices of health status vary from study to study but usually consist of some combination of subjective (self-reported) and objective measures, including activity limitations, number of chronic conditions, presence of pain, degree of worry (perceived seriousness), and perceived health status (e.g., compared to one’s peers).

The Andersen-Newman model has been very influential in laying out determinants of help-seeking and health services utilization at both individual and environmental levels.

11 Andersen & Newman (1973, p.100) define technology and norms as follows: “Technology” is defined as “a set of principles and techniques useful to bring about change toward desired ends.” “Norms” represent “the spectrum of modes whereby social systems induce or insure normal compliance on the part of members.”
12 Anderson & Newman point out that all these components are inter-related. They also acknowledge that many other factors may directly influence an individual’s use of a health service besides the health services system.
For example, this model was influential in the development of the Precede-Proceed model of health promotion planning (Green & Kreuter, 1991). For all its influence, however, the Andersen-Newman model has come under criticism for equating self-assessed health status with need and for its focus on structure (e.g., laying out the components that influence utilization) without consideration of the processes underlying structure. The next section elaborates upon these concerns.

**Exploring Underlying Processes in Help-seeking**

Several researchers (e.g., Mechanic, 1979; Hansell, Sherman & Mechanic, 1991; Strain, 1991) have argued that measures of need for medical care are not "pure" measures of illness, and that answers to questions on health, for example in health surveys, reflect, in addition to morbidity, a complex pattern of illness perception and behaviour (Mechanic, 1979). The Andersen-Newman model has been viewed as a fixed, sequentially-ordered look at utilization that fails to tap the interactive, contextual, and developmental processes underlying the use of health services (Mechanic, 1979). Moreover, a focus only on volume of services utilized, as in the Andersen-Newman model, neglects all those who cope with health issues in other ways, through the use of informal means (e.g., self-care remedies), as well as formal services (Penning & Chappell, 1990; Strain, 1991).

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13Within the field of health promotion, the Precede-Proceed Model of health promotion planning (Green & Kreuter, 1991) has emerged as one of the most comprehensive and adaptable ecological models for designing and implementing health promotion programs. "Precede" stands for "Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation." "Proceed" stands for "Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development." As the name indicates, this model, like the Andersen-Newman model, places great emphasis on the constructs of predisposing and enabling factors, and, additionally, on reinforcing factors because, as the authors elucidate, whether we are trying to explain, predict, or change a behaviour, either at the individual or collective level, we must attend to the factors underlying that behaviour, which fall mostly into the psychological domain. Green & Kreuter (1991) define predisposing factors as those antecedents to behaviour that provide the rationale or motivation for the behaviour; as with the Andersen-Newman model, these consist of knowledge, attitudes, beliefs, values, and perceived abilities. Enabling factors are characteristics of the environment that enable a motivation to be realized. Reinforcing factors (not considered in the Andersen-Newman model) occur subsequent to a behaviour to provide the continuing reward or incentive for the behaviour. Green and Kreuter (1991) emphasize that no single behaviour or action is caused by just one factor and any plan to influence behaviour must consider all three sets of factors.
Two conceptual frameworks from medical sociology that attempt to address the elements of process in help-seeking are the construct of illness behaviour (Mechanic & Volkart, 1961), and the Common Sense Model (Prohaska, Leventhal, Leventhal, & Keller, 1985), which incorporates the construct of illness representation.

The Construct of Illness Behaviour

The study of illness behaviour was introduced (Mechanic & Volkart, 1961) to “depict the large variability in reactions to symptoms and illness and to identify the various sociocultural, environmental and psychological factors that affected such reactions.” (Mechanic, 1995, p.1208). This developed into the construct of illness behaviour, referring to: “the varying ways individuals respond to bodily indications, how they monitor internal states, define and interpret symptoms, make attributions, take remedial actions and utilize various sources of formal and informal care.” (Mechanic, 1995, p.1208). As Mechanic stated (1995, p.1208), this construct therefore views illness “not only (as) a state of a person, but (as) a mode of coping.”

Work in pain research and chronic illness (which may include hearing loss), for example, has long noted striking variability among individual responses to seemingly comparable body states. A central component in the construct of illness behaviour is the importance attached to self-attention and body awareness.

The concept of illness behaviour has directed researchers to look at the myriad of psychosocial variables that influence the process of help-seeking. The way one responds to internal states (e.g., perception that symptoms are worsening vs. abating), the impact of that response on one’s social roles, the resources available to successfully cope with health-related problems, and the overall effect of one’s approach to illness on physical and psychological well-being all contribute to one’s self-assessment of health status. It is therefore not surprising that lower self-assessed health would be correlated with greater help-seeking and health service utilization.
Common Sense Model

Leventhal and colleagues extended this consideration of process in their Common-Sense Model, which posits that people develop a representation of illness threats that guides their health-directed behaviours, with attributes ascribed to these threats such as symptoms and label, causes, course (i.e., the interval from symptom onset through illness duration) and consequences for health (Leventhal, Meyer, & Nerenz, 1980). This cognitive model was expanded and transformed to the self-regulatory model of illness behaviour (Cameron, Leventhal, & Leventhal, 1993), which hypothesizes that emotional responses add to the cognitive illness representation to direct coping responses. Findings on help-seeking based on this model were obtained in a longitudinal study of middle-aged and older adults matched on age, gender and health status (Cameron et al., 1993).

In the study of Cameron and colleagues (1993), symptoms were identified as necessary, but insufficient, cues to help-seeking. Compared with their matched controls, help-seekers rated their symptoms as more severe and as having greater long-term consequences (as measured by perceived limitations on activities and perceived lack of control over the problem). Symptoms, according to these authors, are the targets for coping responses and serve as points of reference for appraising coping outcomes. Those who seek help engage in more active coping strategies but rate their coping efforts as less effective than matched controls. Social communication about the problem was identified as an important coping procedure and significant others advised those with problems to seek care in fully 50% of help-seeking cases, highlighting the importance of social support and “social permission” in help-seeking (Zola, 1973).

Cameron et al. concluded that help-seeking is based on cognitive representations of symptoms that are more elaborate and well-defined in those who seek help than in those who don’t seek help. They also concluded that seeking help serves to relieve the load of emotional distress created by symptoms. In another study, older adults were interviewed and their medical records for the year before and after the interview were reviewed (Hansell et al., 1991). Results suggested a significant, albeit weak, correlation between increased volume of initial visits to physicians and higher levels of body awareness. Their
results also suggested that greater body awareness, both physiological and psychological, is associated significantly with poorer self-assessments of health over time, (the authors acknowledge that more objective, external assessments of health status would have been preferable to self-report measures). Turner et al. (1991), in a study of service utilization by physically disabled persons, concluded that physical limitations (as defined using measures of activity limitation, pain, self-report of health, and psychological distress) play a significant causal role in service utilization. It was hypothesized that this finding may be related in part to an increased “preoccupation” (p. 294) with health on the part of physically limited individuals, (which could be interpreted as greater attention to bodily states).

One final model will now be presented that specifically explores delay in help-seeking.

Exploring Delay in Help-seeking

Many studies have investigated delay in seeking medical help, conceptualizing delay as the total time elapsing from when the person first noticed a symptom up to the time he or she was seen by a doctor. Safer, Tharps, Jackson, and Leventhal (1979) divided total delay into three components: appraisal delay, illness delay, and utilization delay. They studied how different processes may work at each of these stages and predict utilization.

Appraisal delay was defined as the number of days that elapsed from the day the patient first noticed his/her symptom up to the day he/she concluded he/she was ill. The authors posited that perception/sensation make one aware of symptoms, and that appraisal and coping strategies were the most probable predictors of appraisal delay. Symptoms that provide well-defined and strong sensations were felt to be more likely to lead to appraisals that something specific is wrong and to shorten the appraisal period, whereas vague complaints or weak and varying symptoms are hard to define and interpret, consequently lengthening the appraisal period.

Illness delay is defined as the number of days from the end of the appraisal delay up to the day when the patient decided to seek professional help. The final stage of delay,
utilization delay, is the period between the point at which the patient decided to seek help to when the patient was actually seen at the clinic. In their study, patients who had short total delays were persons who did not have a competing personal problem (e.g., divorce) and who had a painful symptom. Patients with old symptoms and those who imagined possible, severe consequences of their illness had long illness delays. The best predictors of long utilization delays were concern about the monetary cost of treatment, the absence of pain, and the belief that one’s symptoms could not be cured. The results supported the hypothesis that different factors mediate delay in each of the three stages, while recognizing that the length of delay in one stage could affect the length of delay in another stage.

The analytic framework provided by Safer et al. (1979) is useful conceptually, although its value in predicting help-seeking, as with other studies in the literature, may be limited by study design. Specifically, these studies are retrospective and subject to the recall biases associated with retrospection. Also, studies revolve around illness episodes that last days or weeks before help is sought, unlike presbycusis, the symptoms of which may drag on for years before help is sought.

**Gender Differences in Help-seeking**

Many studies have reported that females have higher rates of health service utilization than males (Tessler, Mechanic, & Dimond, 1976; Verbrugge, 1979). Compared with men, women have been found to engage more frequently in health-directed behaviours and seek health-related information; this greater interest in and concern with health is attributed to social role differentiation (Verbrugge, 1985). These gender differences seem to disappear for older adults (Liang et al., 1999; Mutran & Ferraro, 1988). There is evidence that older women are more likely than men to suffer from chronic ailments such as arthritis and musculoskeletal problems (versus the much higher incidence of heart attack and strokes among older men) (Verbrugge, 1984). Mutran and Ferraro (1988) found that although older women report more symptoms (also reported by Hibbard & Pope, 1983), perhaps related to the greater prevalence of chronic problems in women, this did not translate into a greater number of visits to physicians. Gender
differences in discretionary use of physician services disappeared after self-assessed need for medical care was considered; that is, men who assessed their health as poor were more likely to see a physician than were women who assessed their health as poor. Also, given equal levels of disability and overall health status among older adults, it is men who are more likely to be hospitalized, which suggests differences in social factors that are determined primarily by physician preferences rather than by biological differences.

It seems difficult to extract a main effect of gender on help-seeking; moreover, it seems of little utility to even attempt to extract one, given the complexity of psychosocial factors that influence help-seeking. As an example, family dynamics, most notably between spouses, may be such that one member may exert a significant influence upon the other with regard to help-seeking. As a second example, consider the fact that a greater percentage of older women than men live in poverty (Townson, 2000), and that a significant link has been established between poverty and reduced health status (Wilkinson, 1992). Therefore, the finding that more older women than men seek help related to health status may reveal more about help-seeking factors related to socioeconomics rather than about gender per se as a factor in help-seeking.

Aging Effects in Help-seeking

There is consensus that growing older leads to a greater average need for health care services. Attitudes about the health care system appear to affect usage among older adults: medical skepticism reduces usage while a stronger belief in the value of preventive health care appears to promote the use of services (Penning & Chappell, 1990; Strain, 1991). Family and spousal support appears more important than peer influences for older groups (Umberson, 1992); however, advice from friends might be influential among older persons living alone who are unsure how to interpret a physical complaint (Edwardson, Dean & Brauner, 1995). These findings demonstrate how influences may change and/or be cumulative across the lifespan and with life circumstances, highlighting the need to consider help-seeking within the social context of the individual (Haug, Musil, Warner, & Morris, 1998).
It is important to distinguish between one’s proclivity to seek help and the actual use of health services. As Barer, Evans, Hertzman, & Johri (1998) elucidate, health care utilization among older adults is largely a function of the way that health services are delivered to this population segment. In the last few decades, they point out, greater health care investigation and intervention among the elderly who seek help has led to a greater proportion of hospital admissions and longer hospital stays among the older population segment. Greater health care utilization, therefore, is not just a function of individuals’ perceived needs, but is heavily influenced by the system of health care delivery, especially once help-seeking has been initiated.\(^\text{14}\)

Many studies of older adults and their utilization of health care only examine the number of physician visits, often without even making a distinction between patient-initiated and physician-initiated visits. In terms of patient-initiated visits, older adults are actually quite judicious in their use of services. Elderly adults attribute many symptoms, especially mild chronic ones, to the aging process (Kart, 1981). Older adults are less likely to see chronic mild symptoms as illness warnings (Prohaska et al., 1985), and symptoms that are less likely to be associated with illness by older respondents are ones that might be expected (correctly or incorrectly) to increase with age (Kart, 1981). Furthermore, those who view variables associated with stress as predictors of health service utilization acknowledge that stress may be less relevant in old age, with evidence that the elderly attempt to minimize the experience of stress as a coping strategy (Leventhal, Leventhal, Schaefer, & Easterling, 1993).

**Summary of General Literature on Help-seeking**

The preceding review has presented only a subset of the voluminous literature on health behaviour, help-seeking and health services utilization, with the intent to provide an overview of some of the major theories and models, and research studies related to the

\(^{14}\) The complexity of health problems and associated medications in the elderly, paired with an increasingly fractionated system of diagnosis and treatment among numerous medical and para-medical specialties, also leads to more frequent and/or longer hospital stays.
topic of help-seeking. This review has spanned many disciplinary perspectives but nevertheless reveals a convergence of themes regarding the factors that contribute to help-seeking, health services utilization and the decision-making process behind such utilization. In general, symptoms appear to be a necessary but insufficient stimulus to help-seeking. More to the point, it is the way symptoms are interpreted and responded to that affects decisions around help-seeking (i.e., do they become labeled as illness representations or develop into illness behaviour). There is evidence that those who are more aware of symptoms (have greater body awareness), who interpret symptoms as severe, who perceive that they are not coping effectively with these symptoms, and who believe in the efficacy of treatment are more likely to seek out services. There appears to be consensus that a wide range of social, psychological and physiological factors interacts in the dynamic process of help-seeking. The relative contribution of each category of factors is not yet known, and indeed may be too variable across individuals and situations to be determined. Consider, for example, the additional layer of complexity introduced by the effects of culture and ethnicity, which have not even been touched upon in this discussion.

Moreover, assumptions based on simplistic analyses must be challenged. While the process leading up to a decision to seek help for a health condition may be highly individualistic, service utilization encompasses factors outside the decision-making realm of individuals that are mediated by service delivery models, especially physician preferences, and socio-economics. This points to the importance of considering the context (e.g., social, economic, and political) within which wide-sweeping generalizations are made about sub-populations, in particular the aging population. Just as important social determinants of health across the lifespan have been established (Hertzman, Frank, & Evans, 1994; Hertzman, 1999), the social determinants of help-seeking and health care utilization must be carefully considered.

An over-riding methodological shortcoming of many studies of help-seeking and health services utilization is their reliance upon self-report of health as a measure of health status that in turn defines need. In this research design context, it should come as no surprise that subjects who rate their health poorer seek help more than others whose view
of their health is more positive. Research is needed to address what mediates between psychosocial and physiological variables and one’s self-appraisal of health and particular health conditions (e.g., Haug et al., 1998). The studies reviewed suggest that factors underlying one’s choice of coping styles and strategies, and their perceived effectiveness may play a key mediating role. The literature reviewed also underscores the need for better research paradigms to investigate help-seeking.

While the literature described above provides much information on help-seeking and the utilization of health services, one challenge in trying to relate this literature to help-seeking for hearing loss is that population-based studies often cover a wide range of health conditions. Given evidence that symptoms may be an important factor in help-seeking, one question that arises is: How does help-seeking for acute, possibly life threatening, episodes of illness differ from help-seeking by older adults for chronic conditions more closely related to presbycusis? To look at this issue more closely, it is worthwhile to explore studies of help-seeking for a specific health condition or issue somewhat similar to presbycusis. Some well-designed research on oral health in older adults provides a good example.

Help-seeking and Oral Health

My years of clinical observation, as well as comments of the participants in the current research project, suggest that older persons with hearing problems often spontaneously compare their hearing with other bodily systems that are in decline with age, most commonly eyes and teeth. Patients compare dental and hearing problems in terms of how well their teeth and ears work (if they have their own teeth) and the limited usefulness of available prostheses (if they have or are considering dentures or a hearing aid). There are several perceived similarities between hearing aids and dentures, such as their ability to improve function and their limited ability to restore function without irritation or inconvenience. Thus, an exploration of help-seeking for dental problems may provide, along some dimensions, an interesting parallel to help-seeking for hearing problems.
Oral health in older adults has been a research focus of MacEntee and colleagues. Their work is distinguished by a blend of quantitative and qualitative methodology and a refreshing interdisciplinary approach. In one study that looked at the influence of age and gender on oral health and the use of services (MacEntee, Stolar, & Glick, 1993), over 500 independently-living adults over 70 years of age were interviewed about their health and social support and a subset of 255 (49%) were examined by a dentist. No significant differences in age, gender, self-reported oral health or use of services were noted between the group who agreed to an examination and those who declined. The self-assessment of oral health was much more optimistic than the clinical data revealed: 78% rated their teeth or mouth in at least good condition, compared with a rating of good in only 45% of mouths examined. This optimistic self-assessment of dental status matched self-assessment of general health status. Age and gender were not significantly associated with oral health and dental complaints, but both age and gender did influence the use of dental services, with greater use noted among women, younger participants, and those who were not concerned about the cost of service. A majority claimed to have visited a dentist “since age 65”, but dental use declined as age increased, even though visits to primary care physicians increased. Compared with younger participants, a greater proportion of older participants reported that they only went to dentists when they had pain. A major finding was that the use of dental services for older adults appeared to match the pattern of use established in their younger years. This finding is consistent with the findings of the health services utilization studies cited above, insofar as patterns of previous utilization of health services are among the best predictors of subsequent utilization, after correcting for health status (Eve, 1988; Turner et al., 1991).

About one-third of all subjects complained of a mouth problem, and about half of those who complained said that the problem had been present for at least a year. Complaints were most frequently related to denture discomfort and dental pain. Over one-third of those with a long-standing problem would not or could not identify why they failed to seek professional help. The remainder gave a variety of reasons why help was not sought, in the following order of frequency: the problems were unimportant, cost was a concern, getting to a dentist was difficult, previous treatment had been unhelpful, and
sickness preempted action. Almost one third complained that they could not get dental treatment. In an effort to overcome limitations of the structured interviews used in their studies, MacEntee and colleagues engaged a smaller number (24) of independently-living elders in open-ended interviews prompted by the question: What is the significance of oral health in the lives of older adults? (MacEntee, Hole, & Stolar, 1997). Findings were quite different in this qualitative paradigm. Here older adults described oral health not from a focus on dysfunction, but rather within the context of three interacting themes: comfort, hygiene, and health. These three themes illustrated that oral health was important for social interactions at least as much as for personal comfort and general health. The narratives of these elders on the topic of oral health also emphasized the positive role of adaptation and development as an integral part of successful aging. On the basis of these quantitative and qualitative studies, MacEntee (1996) recommended:

that future investigations of behaviour and beliefs relating to oral health should be sensitive to this balance of development and decline that seems to regulate our lives as we get older, and I suggest that quantitative methods alone fail to penetrate much below the surface of this complicated psychological environment. (p.80)

Summary of Help-seeking and Oral Health

MacEntee et al.’s (1993) findings show both similarities and differences with the previous studies on help-seeking that have been reviewed. Two points of similarity are that delay occurred before help was sought for dental problems and that use of dental service in younger years was a good predictor of its use in old age. Factors pertaining to service delivery were noted to be important: older adults expressed concern about the cost and availability of dental services. One noteworthy difference compared with other help-seeking studies reviewed was the finding that the use of dental services declined with age in MacEntee et al.’s study, despite an increase in the use of physician services. This difference may reflect elders’ lower priority attached to dental care compared with other

15 The factors underlying this complaint were not elucidated by MacEntee et al. (1993).
health conditions, a skepticism about the efficacy of available solutions, and/or the lack of available services.

An important revelation provided by MacEntee et al.'s (1997) qualitative approach was the balance that older adults attempt to reach between seeking help for symptoms and adjusting to those symptoms. For example, many older adults with ill-fitting dentures chose to accommodate to the problem rather than seek help. This pattern matches the general help-seeking literature and studies of aging that suggest that, compared with younger persons, older adults may tolerate symptoms that are of greater severity or for a longer time before they seek help.

Against the backdrop of perspectives gleaned from the above studies, help-seeking for hearing loss will now be considered in detail to elucidate factors that are likely to promote and hinder help-seeking.

Help-seeking for Hearing Loss

There have been few studies that specifically examined help-seeking related to hearing loss, despite statistics cited in Chapter 1 that indicate that only a small percentage of persons who may benefit from audiologic rehabilitation services and products seek them out and that an even smaller percentage utilize them. Hearing aids, assistive listening devices, and communication strategies training are not ideal solutions, but they have proven to be effective in reducing the disabling effects of hearing loss and enhancing quality of life (e.g., Mulrow et al., 1990; Pichora-Fuller & Carson, 2000; Weinstein, 1991). Why do people not avail themselves of these solutions? The following studies provide clues.

Studies of Help-seeking for Hearing Loss

Gilhome Herbst, Meredith and Stephens (1991) looked at the social implications of hearing impairment as they affect help-seeking activity in two different populations of elderly people. The goal of their study was to explore social and cultural differences
between the two populations. The samples consisted of all persons aged 70 years and over registered at two particular general medicine practices, one in an inner London borough (n= 253) and one in a Welsh village (n= 99). The London population was studied between 1978 and 1980 and reported on earlier by Humphrey, Gilhome Herbst, and Faruqi (1981). The Welsh study took place in 1989. It should be noted that at least the Welsh sample included a large number of people who had hearing loss due to significant occupational noise exposure. In both samples, approximately 25% of hearing-impaired participants (with hearing impairment roughly defined as a mean loss of 35 dB HL or greater across the "speech frequencies" in the better ear) replied negatively when asked if they had ever noticed any difficulty with their own hearing. Of those who did admit to difficulty, 25% of the Welsh group said they had never consulted their doctor\textsuperscript{16} about it. Forty four percent (17 out of 39) of the Welsh group who did consult with a physician obtained a hearing aid; the paper does not discuss how much time may have elapsed between the visit to the physician and obtaining the aid, or how many times the patient may have discussed his/her hearing at appointments with the doctor before a referral was made.

Results indicate that 56% of hard-of-hearing persons who did consult with their doctor about hearing problems did not obtain an aid because the physician did not refer them for one. Details are not provided regarding how this question about consultation was worded, or whether the response format was closed- or open-ended, although such details may have influenced how participants responded. Thus it is unclear to what extent the physician may have been responsible for the lack of follow-through (especially given that, in the opinion of the authors, the physician involved in this study was sympathetic to the concerns of hard-of-hearing persons). Other factors that may be implicated, such as a patient's attitude toward hearing aids and issues surrounding service delivery (e.g., long waiting lists or convoluted referral and follow-up procedures) are not reported.\textsuperscript{17} The authors conclude that, for the London sample, the two major determinants of help-seeking

\textsuperscript{16} Please note that all references to "doctor" or "physician" in describing British studies refer to a general medical practitioner. In the British hearing health care system there are specialists called "audiological physician" and "otolaryngologist" (ENT).

\textsuperscript{17} The authors state that "the process of procuring an aid was found to be equally problematic in each sample" (p. 212), but these problems are not explained.
were the severity of impairment and the number of years hearing loss was noted before reaching retirement age.

Swan and Gatehouse (1990) sought to identify factors that lead individuals to seek management for their hearing loss. They compared 269 consecutive new adult referrals to one audiology clinic (consulters) with 286 others identified in a British National Study of Hearing 18 as having never sought medical advice as an adult about their ears or hearing (non-consulters). Their aim was to compare the level of disability and handicap in these two groups after controlling for impairment, age, gender, and socioeconomic status. Impairment was measured as the better-ear and worse-ear pure-tone averages at .5, 1, 2 and 4 kHz. Disability was measured using a monaural speech discrimination test in quiet, with the non-test ear masked. Reported disability and handicap were assessed in two ways. First, subjects were asked to give their own estimate of their hearing in each ear as a percentage of normal hearing (100%). Second, all non-consulters and 60% of consulters completed the Institute of Hearing Research Hearing Questionnaire (Swan & Gatehouse, 1990, p. 160). Compared with non-consulters, results showed that consulters had greater measured disability, and consulters whose better average threshold was less than 40 dB HL had greater reported handicap and disability (for everyday speech, speech in quiet, and sound localization) when measured disability and impairment were controlled. 19 Consulters were also found to have more asymmetrical hearing than non-consulters. Swan and Gatehouse (1990) conclude that the main factors that influence help-seeking are disability and handicap, which do not necessarily correspond to one's hearing impairment. It is noteworthy that a greater percentage of consulters were women than men.

The authors acknowledge the limitations of using one measure of disability in this study (monaural speech discrimination in quiet, the choice of which was determined by the standard test battery in use at the audiology clinic from which all consulters were drawn), and from the test options chosen for the National Study of Hearing. They conclude their article by stating that a valid and practical test of disability to measure the efficacy of

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18 Participants were a stratified population sample from the electoral register.

19 More severely impaired consulters and non-consulters reported similar severe disability and handicap, a result that may reflect a floor effect in the questionnaire scale.
rehabilitation is not yet in use. Such a measure is required before there can be a shift from the current practice of managing patients on the basis of pure-tone thresholds (impairment). The imperative for this shift is suggested by the fact that patients consult because of disability and handicap (albeit defined by limited available measures), issues that do not necessarily correspond directly to their impairment.

A study by Brink, Wit, Kempen, and Heuvelen (1996) examined help-seeking for hearing loss and compared groups showing dissimilar help-seeking behaviours in terms of their attitudes toward hearing loss and hearing aids. Their community-based study was part of a Dutch longitudinal study on aging. The mean age of the 624 participants was 68.9 years (range 57-92), 56% of whom were female. Hearing was assessed for air-conducted tones at .5, 1, 2 and 4 kHz. Participants with a mean loss of 35 dB HL or more in both ears were considered hearing impaired; 144 (23.1%) of the sample met this criterion. Help-seeking for hearing loss was assessed by a questionnaire, which inquired about discussion of hearing problems with a physician, whether a hearing aid had been tried, and possession and use of a hearing aid. Each hearing-impaired participant completed a twenty-item questionnaire on perceptions of disability and handicap. In addition, the investigators developed and administered an attitude questionnaire based on factors in the revised Health Belief Model, that probed beliefs about the severity of one’s hearing problems, benefits of using a hearing aid, associated costs (or barriers), and interpretations of the opinions of significant others on hearing loss and hearing aids.

In this study, 27% of hard-of-hearing participants had not discussed hearing loss with their doctor, a further 26% had discussed it but decided not to try a hearing aid. Three percent did not keep the aid after a trial period. Forty-one percent of participants reportedly used a hearing aid; a further three percent reportedly had an aid but did not use it.

Help-seeking was not found to be related to sex or age (when level of hearing impairment was controlled), but participants who took greater help-seeking action were generally more impaired. Two distinct patterns of differences in attitude among the help-seeking groups were found. First, hearing aid users perceived their hearing problems to be more serious, reported greater social pressure to seek help, and saw greater benefits of aid
utilization. In contrast, those who did not consult a doctor reported the least severity in terms of perceived hearing problem, social pressure, and expected benefits from a hearing aid. Second, those who consulted a doctor but did not try an aid perceived greater stigma associated with hearing aid use. They also reported that significant others saw more disadvantages than benefits to an aid and had advised them against obtaining one. However, the researchers did not solicit the views of significant others directly, and they suggest that caution be exercised in interpreting the views of others filtered through hard-of-hearing respondents.

Brink et al. (1996) raise the important point that the fact that attitudinal factors covary with help-seeking behaviour, as outlined in the above findings, does not prove that attitude causes behaviour; it is equally reasonable to conclude that behaviour causes attitude. They cite Festinger's theory of cognitive dissonance (Festinger, 1957), which suggests that individuals adjust their beliefs to their behaviours, and other psychologists (e.g., Bem, 1967), who argue that this adjustment may be explained simply by the fact that people observe their own behaviour and infer their attitudes and beliefs from it. The authors conclude that only prospective studies, not yet undertaken, that demonstrate the existence of beliefs prior to the behaviour could establish that attitude is a determinant of behaviour.

A common conclusion of the three studies described above is that greater help-seeking behaviour is correlated with greater perceived seriousness (disability and handicap) of a hearing problem. This finding is consistent with results from the general literature on help-seeking and health services utilization that show that variables pertaining to needs are the best predictors of service use. Nevertheless it remains a challenge to extract the true factors influencing hearing aid use and help-seeking. For example, if one asks participants whether the following statement (taken from Brink et al., 1996) is true, partly true, or not true for themselves (as a way to tap severity of loss as a factor in assessing attitude): “I can still manage quite well without a hearing aid”, an affirmative answer that correlates strongly with a lack of help-seeking is interesting but reveals little about the factors underlying this perception. Questionnaires are limited in the insights they provide into the factors that influence the responder. A forced-choice response format, in
particular, constrains respondents to answers that may reflect assumptions inherent in the questionnaire. In short, such questions don’t adequately tap into why help is not sought.

The findings of Brink et al. (1996), like those of Gilhome Herbst et al. (1991), raise important questions about the roles that physicians and the system of hearing health care delivery play in help-seeking. There may be many reasons why one quarter of participants did not try an aid after consulting their doctor; Brink et al. (1996) discuss this issue in terms of patients’ attitudes toward hearing loss and hearing aids. Their inaugural study did not make explicit a number of key points, such as the nature of the steps involved, or the potential barriers to getting from the physician’s office (assuming this step is required) to the hearing aid and other rehabilitative solutions, whether the doctors who were consulted all recommended a hearing aid trial and why they did or did not do so, what kind of waiting list may be a deterrent, what financial considerations may have been at play, and so on. To date, the importance of such contextual factors has not been adequately considered in population-based studies of help-seeking for hearing loss. Future studies of help-seeking for hearing loss should investigate such factors.

Brink et al., (1996) suggest that their results show a higher incidence of help-seeking for hearing impairment compared with the British study by Gilhome Herbst and colleagues (1991), after correcting for age differences and criteria differences for defining hearing impairment between samples. A greater percentage of Dutch than British hard-of-hearing participants sought help from their doctor (73% vs. 57%), and obtained a hearing aid (44 % vs. 25%). These differences may reflect true cultural differences in help-seeking that result from more positive attitudes toward help-seeking, and/or more streamlined and comprehensive hearing care services in the Netherlands. Such a conclusion is speculative, however, without knowing the service delivery model in place for each study, and, in the absence of details about the wording of the questions asked, the reasons for the particular responses. For example, more patients may seek help and obtain hearing aids when the state or another third party pays for hearing aids, and/or the participant may be reluctant to disclose dissatisfaction or non-use in such cases.

In summary, the studies described above document that many adults with hearing impairment don’t seek help by consulting their doctor, and many who do consult do not
take, or are not referred for, further rehabilitation. They also suggest that help-seeking is positively correlated with the perceived seriousness of one's hearing problem, although we have seen how this finding may be a reflection of how disability and handicap are measured. The emphasis of these quantitative population-based studies has been on the role of auditory factors in help-seeking. With the exception of Brink et al.'s attention to attitudes and health beliefs, or predisposing factors (Brink et al., 1996), the specific psychosocial factors that may promote or hinder help-seeking for hearing loss have not been addressed. The role of co-occurring health conditions, for example, has not been looked at, nor, as mentioned, have the effects of culture or service delivery models on help-seeking been examined. In summary, what is needed in research on help-seeking for hearing loss is an approach that is more ecological, that is, one that more thoroughly examines the contributions of the hard-of-hearing person, significant others, and the environment.

In contrast to the quantitative focus of the above studies, Getty, Gagné, and McDuff (1996) qualitatively explored the obstacles to seeking help for hearing loss. They conducted a series of focus group interviews with 24 women and men over 70 years of age who lived in an urban Quebec community and who had seen an audiologist and obtained a hearing aid or aids (information was not obtained on how many used their aids). A follow-up study was carried out with a similar population that public health nurses identified as having a hearing problem but that never consulted a professional about hearing problems. While the quantitative studies cited above focused on auditory factors related to the hard-of-hearing individual that may prompt help-seeking, Getty et al.'s (1996) study revealed a wide range of factors from the personal (micro) to societal (macro) that work to prevent or delay help-seeking for hearing loss. These factors are included in the following section that summarizes the literature on how such factors seem to delay help-seeking.
Factors that Delay Help-seeking

The insidious advance of hearing loss with advancing age is such that often many years may pass before one is aware that one's hearing has deteriorated. An important point is made by Gagné Hétu, Getty, and McDuff (1995), who remind us that having a limited awareness of a problem is not the same as denying that a problem exists. Pichora-Fuller and Kirson (1994) report that not only hard-of-hearing persons but also young and old normal-hearing persons tend to attribute difficulty understanding spoken language to non-auditory factors. Many of these attributions may be valid. Getty et al. (1996) reported that elderly persons sometimes confuse the symptoms of hearing loss with those of senility. So we see that it is frequently difficult to link cause and effect when it comes to hearing impairment and its consequences.

Presbycusis is also passively accepted by seniors as a "normal part of aging" (Brink et al., 1996). Maurer and Rupp (1979) dubbed this "geriapathy," and we have seen this phenomenon in other studies of help-seeking among the aged. Physicians and other professionals, and indeed society at large, are also of the opinion that hearing loss comes with age and can't be helped or is not consequential enough to warrant hearing aids (e.g., Humphrey et al., 1981). Such attitudes may be a reason why many who do consult their doctor about hearing problems are not referred for further help (Gilhome Herbst et al., 1991; Lichtenstein, Bess, & Logan, 1988). Hearing loss is a chronic condition, but because it is not painful (like arthritis\(^{20}\)) or life-threatening (like cancer or heart disease) it may be deemed low priority for help-seeking (Getty et al., 1996). Furthermore, seniors in Getty et al.'s study (1996) spoke of their resistance to change "at my age" and of difficulty learning the new skills involved in hearing aid use.

Studies indicate that older listeners tend to report less handicap than younger listeners with the same hearing loss (e.g., Garstecki & Erler, 1996; Gatehouse, 1991; Lutman, 1991). This is despite the greater deleterious effects of noise and reverberation on aged listeners due to a decline in peripheral and/or central processing abilities. This under-

\(^{20}\) It is noteworthy that significant help-seeking delay is noted as well for arthritis, even for those with significant pain (reported in Zola, 1986).
reporting of hearing difficulties may be due in part to a lack of awareness of changes in hearing abilities as noted above, but may also reflect some combination of change in communication expectations, needs, or environments (Cheesman, 1997). Furthermore, one's communication goals may have a strong influence on the degree of handicap experienced in conversation (e.g., Johnson & Pichora-Fuller, 1994; Pichora-Fuller, Johnson, & Roodenburg, 1998). This relates to the earlier discussion of communication in aging where it was noted that older persons may attach more importance to the interactional, relational or social function of language than to the transactional, ideational component.

Other factors that delay help-seeking are associated with knowledge of and attitudes toward the available "solutions" to hearing loss. Hearing aids have a "bad" reputation and are seen as devices that do not "cure" hearing loss, but instead are "ineffective crutches" that make the impairment more visible (e.g., Getty et al., 1996; Humphrey et al., 1981; McCormick, Pichora-Fuller, Paccioretti, & Lamb, 1994). Hallberg and Carlsson (1991) suggest that by increasing the visibility of a hearing loss a hearing aid may actually contribute to increasing one's handicap by increasing stigma (see also Goffman, 1963). In addition, there is little knowledge about other rehabilitative solutions to handicapping situations, such as use of assistive listening devices and communication strategies (e.g., Getty et al., 1996). Stephens (1996), for example, reports that "Hearing Concern," the British association of hard-of-hearing persons, identified the need for information on assistive devices as one of its top priorities.

Another group of factors are ones that may restrict accessibility to services and products. For example, some people may be impeded in help-seeking for hearing problems because of impaired mobility or physical disability; many other individuals are limited by financial barriers (e.g., Franks & Beckmann, 1985). Getty et al., (1996) cite additional organizational factors associated with the distribution of audiological services. Often there is limited knowledge by the public of the services available. In residential care settings across Canada, for example, there is a lack of knowledge as to where to obtain hearing devices for residents and training in the use and care of hearing instruments is often
lacking (Carson, 1997). Similarly, in the province of Québec, Getty et al. (1996) noted that the consultation and referral process in the community is long and complicated.

Finally, with regard to the issue of identity, it has been suggested that while there is no shared identity or culture linking hard-of-hearing people, all those who have their hearing tested share the common experience of “coming out” and revealing the possibility of being hard of hearing to at least a selected portion of the public world. In avoiding the possible diagnosis of “hearing impaired,” the individual avoids the serious social consequences of a publicly recognized hearing disability. Going public with one’s hearing loss entails a reconstruction of one’s sense of self to incorporate hearing loss into one’s identity, at both the individual and group level. It may also entail a redirection of one’s life expectations. Such personal evaluations and shifts require the deployment of significant cognitive and emotional resources (e.g., McCormick et al., 1994; McKellin, 1994).

Factors that Facilitate Help-seeking and Cues to Action

Studies indicate that there are two main factors that trigger help-seeking by a hard-of-hearing person. As previously discussed, one factor is the severity of the disability and handicap related to the hearing loss (as opposed to the hearing impairment per se). The second is social pressure from significant others to take action. Let us consider this latter determinant in more detail.

Social pressure is exerted by significant others for the hard-of-hearing person to “do something” about her/his hearing problem (Getty et al., 1996; Hétu, Riverin, Lalande, & St. Cyr, 1988; Hickson, Hamilton, & Orange, 1986; O’Mahoney, Stephens, & Cadge, 1996). O’Mahoney et al. (1996) report on results of a questionnaire they administered to 95 consecutive new patients seen at two audiology centres in Britain (London and Cardiff) over a three-month period. Patients were asked to identify whom they perceived as being the main motivating influence in their first seeking help for hearing loss. In analyzing the data, these patients were subdivided into two groups: those who worked or were seeking work outside the home (Group A), and those whose main occupation was within the home (e.g., homemakers) or were retired (Group B). Not surprisingly, these two groups differed in mean age (A: 47.6 years; B: 70.3 years) and mean hearing threshold in the better ear.
(A: 28.8 dB HL; B: 45.3 dB HL). There were significant differences between the two groups in who was reported to be the prime motivator for help-seeking, with four categories identified: self, general practitioner (GP) or other health professional, family member, and other. Prompting by a family member was reported almost twice as often in Group B (55%) compared with Group A. The researchers muse whether this may be an indication that often it is the family who feels more handicapped than the patient. Issues related to lifestyle and lifespan may account for the group differences: Group B members may have greater hearing impairment, but their retired lifestyle may also afford them more contact with family and therefore more opportunities for family members to prompt them to get their hearing checked, regardless of whether they live alone or not.

It was also found that Group B reported self as motivator half as much as Group A and “GP or health professional” as motivator three times as much as Group A. The study, however, did not explore whether it may have been the patient, rather than the professional, who initiated the discussion of hearing loss at an appointment. If the patient raised the topic, then the category of “self-motivated” is underrepresented in their findings. If the patient raised the topic at the insistence of a family member, then the category of family member is underrepresented. Furthermore, the authors acknowledge that the study does not address the issue of how often patients may have raised the issue of hearing with a physician before a referral was finally made. The answer to the question “who do you perceive to be the main motivating influence behind your first seeking help for your hearing loss” does not describe how subjects may interpret their first “motivating influence” in help-seeking: is it the hospital referral (where the questionnaire was administered) or the visit to the physician (as the authors imply). If it is the visit to the doctor, how does the GP act as the main influence? The authors stress that the findings of this pilot study are tentative and answers to their overall research question concerning the relationship between the outcomes of rehabilitation and self-motivation to seek help await further studies now being undertaken.

O’Mahoney et al.’s (1996) study reveals once again that it is challenging to find answers to questions about help-seeking within a research paradigm that relies on questionnaires. Given the complex nature of help-seeking, related to the interweaving of
psychosocial factors (family dynamics, service delivery issues), and methodological interpretation problems for self-report measures, researchers must seek alternative paradigms to more adequately understand this topic.

In their group interviews with seniors, Getty et al. (1996) identified several other triggers to help-seeking for hearing loss. In addition to pressure from family members, a significant change in lifestyle often prompted action, such as the death of a spouse, a divorce, or a marriage. This is consistent with findings of research on other chronic conditions. Meillier, Lund, and Kok (1997), for example, undertook a qualitative study of cues to action in change of lifestyle to prevent coronary heart disease in males. Changes in life circumstances which, in the authors' words, constituted a "breach with existing life patterns" (p.45), included moving to a new place, starting a new job, and having a new partner, and were notable factors in lifestyle changes for seven of their ten interviewees. Other triggers to help-seeking reported by participants in Getty et al's (1996) interviews were changes in visual capacity (which may constitute a change in lifestyle if visual changes became severe and/or support systems or compensatory resources became inadequate), and meeting someone who is satisfied with an audiologic service.

Summary of Literature on Help-seeking for Hearing Loss

In summary then, the research literature on help-seeking for hearing loss to date highlights four important and related points. First, hard-of-hearing persons seek help related to their handicap (and, to a lesser extent, their disability) rather than their impairment. Second, there does not exist a strictly linear relationship among handicap, disability, and impairment. Two individuals with the same audiometric profile (impairment) may differ greatly in handicap. A discussion of handicap is valid only as it prioritizes the perspective of the hard-of-hearing person and contextualizes it to that person's life experiences. The proposed changes to the WHO's ICIDH reflect a growing realization of these qualifications. Third, handicap is not a fixed entity for any individual. A change in

21Expressed here with reference to ICIDH (1980) terminology, the context in which the research referred to was carried out.
lifestyle or change in communication demands, whether abrupt or gradual, may lead to widely varying degrees of handicap at different times. Even without such dramatic change, one's perception of one's handicap evolves over time. Fourth, many agents extrinsic to the hearing loss (i.e., environment) influence the hard-of-hearing person's decision to seek help. They include the influence of significant others, the social roles and communication needs of the hard-of-hearing person, the level of hearing accessibility in society, and the system of service delivery.

As we have seen, this last agent, the service delivery system, has been afforded little attention in studies of help-seeking in general, or in studies specifically concerning help-seeking for hearing loss. We turn now to consider this influence, and in particular the influence of the audiology system on help-seeking, focusing on the relationship between the audiologist and the patient.

The Role of the Audiologist and Audiology Service Delivery in Help-seeking

This section reflects upon the role that the system of health care delivery, particularly the system of hearing health care, may play in help-seeking for hearing loss. The section begins with a review of traditional audiologic practice, including a discussion of self-assessment tools in rehabilitation. In keeping with a major theme of this review, the case is then made for the need to expand upon an ecological service delivery model in audiology. The section concludes with a discussion of clinician-patient communication, its importance within an ecological paradigm, and a review of the few existing studies of audiology-patient interaction.

At the organizational level, the “system” of audiology may exert considerable influence on the hard-of-hearing person. As McKellin (1994) states: "audiologists... are important players in the cultural definition and social construction of hearing loss" (p.219). There is, however, a poor realization within traditional audiologic practice that the culture of audiology and the nature of its relationship with its patients render it part of the environment of the hard-of-hearing person. A more ecological approach would require that this issue be explicitly considered in audiological practice and research.
The discussion in this chapter has touched upon how health service delivery may affect health service utilization. At the “macro” level of policy and program planning, the Andersen-Newman model (1973) posits that access to a service is influenced in part by the financial and personnel resources allocated to the health care system, which in turn affect what services are covered publicly and/or privately, and the length of waiting lists. As with the studies of health care in general, studies of help-seeking for hearing loss have also implicated service distribution, financial barriers, and hard-of-hearing persons’ lack of knowledge about services as factors that delay or prohibit help-seeking (Getty, 1996). Analogous studies of oral health in the elderly reveal service delivery issues, especially among institutionalized elders (MacEntee et al., 1993). Thus, even if one is highly predisposed to seek help, there may be many factors extrinsic to the individual that intervene to restrict or delay access to care.

Depending on how hearing health care service delivery is structured, the physician may play a pivotal role in help-seeking for hearing loss. As gatekeeper, he or she may determine whether or not a patient is referred to an audiologist for hearing help. Family physicians in Denmark (and likely in other cultures) frequently refer elderly hard-of-hearing persons to an ENT, rather than directly to an audiologist, which further delays the rehabilitative process (Parving, Christensen, & Sørenson, 1996).22 Recall that the Andersen-Newman model posited that the evaluation of a patient’s illness state by the professional largely determines the nature and extent of patient care. Even where a physician’s referral is not required for an audiologic assessment, the physician’s opinion may still be sought, given the central role that a primary-care physician plays in many patients’ lives, especially among older adults.

The above points are important factors that work to help or hinder a patient from making an appointment with an audiologist. Nevertheless, once a patient walks into the audiologist’s office, it is the interaction between the audiologist and the patient that may

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22 Parving et al. (1996) note that GPs’ practice of referring older patients to an ENT is prevalent, despite the fact that these patients would always be examined by an audiological physician in the audiology department prior to audiometry.
determine the success or failure of rehabilitation. For this reason, it is important to consider the nature of this interaction.

"Traditional" Audiologic Practice

The way that audiology has been traditionally practised has much in common with standard medical practice, both having derived from the medical or curative model of health. Among the features of this model is a philosophy that views "disease" as an attribute of the individual, and the physician as the agent of healing through identification and treatment of pathology. This "find it and fix it" approach (Keller & Carroll, 1994) sees the role of patients as one of "complying with" or "adhering to" medical recommendations, with little input into the decision-making process (Miller & Crabtree, 1994).

In the medical model, the audiologist moves from impairment to disability to handicap, focusing first on quantifying the hearing impairment in order to "treat" the disability to reduce handicap. The bulk of time in an initial assessment is devoted to test procedures to measure impairment. A rehabilitation program is designed with the audiologist often as primary decision-maker and the hearing aid as the primary rehabilitative tool. Patients are expected to "comply" with "recommendations" to try a hearing aid, with little attention paid to their perceptions of their hearing-related problems compared to the attention given to the assessment of impairment. In his critique, Janzen (1995) suggests that audiologists' aim in rehabilitation is to instill certain beliefs and expectations in hard-of-hearing people so that they come to understand themselves and their problems from the specialist's perspective. Like other health practitioners, the audiologist typically dominates the communication process, setting the agenda and controlling both the subject and the style of discussion (see Giles, Coupland, & Wiemann, 1990, for studies of the discourse styles of physician-patient and nursing home staff-resident interactions). The area of discourse analysis in audiologist-patient interaction is to date essentially uncharted territory (one exception is Coupland & Jaworski, 1997, discussed later in this chapter).
In the medical model, both the patient and her/his health are usually assumed to be very static over time. There has been a lack of appreciation of how the needs of patients, their perceptions of their hearing, and their definition of self may evolve over time (Gagné et al., 1995; Luborsky, 1995). Inherent in the design of clinic schedules, and even the design of outcome measures, is an assumption that the process of rehabilitation should be accomplished rapidly (Heaton, 1992; McCormick et al., 1994).

Another component of “traditional” audiologic practice are self-assessment instruments.

Self-assessment instruments

In recognition of the need to elicit patient perspectives on hearing loss, the past three decades have seen a proliferation of self-assessment instruments in audiology, developed by practitioners and researchers (for a comprehensive review of self-assessment instruments in hearing and related functions, and discussion of relevant issues in self-assessment, see Noble, 1998). Such tools, however, depending on the purpose for which they are used, often fall short of their goal because the questions posed therein are the product of authors’ assumptions of how disability and handicap are expected to be manifested (Gagné et al., 1995; Noble, 1978; 1983; 1998; for an opposing view, see Demorest, & Erdman, 1986). Also, as we have seen in research on help-seeking, several conditions pose serious challenges to the interpretation of the results, e.g., a participant’s lack of awareness of a health problem, or a perception of it as relatively unimportant, or a hidden agenda that attempts to conceal or exaggerate a condition, particularly if the researcher or practitioner infers health status from self-report measures. These issues amount to questions concerning validity.

Questions that may have no relevance in an individual’s experience are suspect in terms of content validity. Construct validity (referring to the theorized nature of the trait or ability under investigation) is at risk when questions attempt to tap communication abilities that may not have great relevance to actual communication. For example, a general question about speech understanding ignores the role of the relationships between
interlocutors and their communication goals that may have a significant impact on their degree of success in understanding. Self-assessment tools decontextualize the experience of hearing loss and any elaborations (e.g., story-telling) or departures the client makes from the structured question-answer-question sequence are often discarded as irrelevant or confounding to the survey plot (Jylha, 1994; Mechanic, 1995; Mishler, 1986). This nomothetic approach (Noble, 1998), whereby individual variation is treated as a source of “noisiness” affecting the assessment task, is a feature of what Mishler (1984) refers to as the “voice of medicine” versus the “voice of the lifeworld”.

In contrast, an ideographic approach (Noble, 1998) attempts to tap the uniqueness of the individual case by some degree of open-ended inquiry. Ideographic measures may pair specific questionnaire items with particular contexts identified by the respondent (e.g., Dillon, James, & Ginis, 1997). Such measures are an attempt to reconcile the need for individualized input from patients with the time available at the appointment. These approaches, however, cannot replace the kind of meaningful assessment obtained through more open-ended qualitative approaches.

Ecological Audiology

The overarching goal of an ecological approach to audiology (Noble, 1978; 1983; Noble & Hétu, 1994) is to find solutions to hearing problems by contextualizing hearing loss within a person’s real life situations. The environmental psychology literature (Stokols, 1992) underscores the importance of adopting, as Gagné and colleagues advocate, a problem-solving approach to hearing loss (Gagné et al., 1995; Gagné, McDuff & Getty, 1999) that focuses on specific person-environment situations of handicap, instead of focusing on the person as hearing-handicapped.

Ecological audiology has been practised in various forms for various purposes, including clinical conversation-based therapy (Erber, 1988), group aural rehabilitation programs (Israelite & Jennings, 1995), rehabilitation programs in special settings such as homes for the aged (Hoek et al., 1997; Jennings & Head, 1994; Pichora-Fuller & Robertson, 1994), evaluation of an outreach program to seniors provided by seniors
(Carson, 1997), community programs promoting communication and hearing health 
(Worrall, Hickson, Barnett & Yiu, 1998) and in occupational health research (Getty & 
Hétu, 1991; Hétu & Getty, 1991). It is noteworthy that these examples have used a 
community participatory approach often initiated by community members, or intensely 
involving them in the planning, implementation, and evaluation of services. Nevertheless, 
we have yet to reconcile a philosophy that is truly centered on the hard-of-hearing person 
with the resource and time constraints of the typical audiology setting, whether that be 
hospital, health unit, or private practice.

An update of one of the best-known models in audiology highlights the growing 
appreciation of the ecological paradigm in audiology. Almost twenty years ago, Goldstein 
and Stephens (1981) put forward a management model to guide clinical practice in 
audiologic rehabilitation. While comprehensive for its era, this model of evaluation and 
remediation was decision-analytic in its approach (similar to other models influenced by 
the medical model such as one presented by Turner, 1991), and minimized the patient’s 
involvement in this decision-analytic process around remediation. Stephens (1996) has 
revisited this model, acknowledging the failure of the initial version to consider 
psychosocial variables, especially the influence of significant others. To correct this, the 
updated model incorporates a “disability and handicap” component (based on WHO 
ICIDH, 1980) as its new starting point, and adds an intermediary component of 
“integration and decision-making” between evaluation and remediation, which Stephens 
describes as “a vital stage..in which key decisions are made jointly between the 
professionals and the hearing impaired people together with an input from Significant 
Others” (1996, p. 61).

An important new component of an ecological approach in audiology is to examine 
the relationship between patient and audiologist in the clinical interaction. Such an 
examination should include consideration of the patient’s knowledge of audiology 
services, the patient’s expectations of those services and their efficacy, how well (or 
poorly) those expectations are met, and how the degree to which expectations are met 
may influence future rehabilitative action. There is, for example, evidence that patient 
satisfaction with his/her physician has been shown to improve patient “adherence” to
therapeutic recommendations (Greene, Adelman, Friedman, & Charon, 1994). Examining the clinical interaction should also encompass examining the audiologic assessment: from the test procedures and physical environment to the discourse style of patient and clinician.

**Clinician-Patient Communication**

It is encouraging that the field of health communication is flourishing and that the topic of clinician-patient communication and its improvement is of increasing interest (e.g., Northouse & Northouse, 1998). To date, most studies have been centered on the communication between physicians and patients, with relatively little work directed to the interaction between other health professionals and patients.

Keller and Carroll (1994) describe three perspectives that inform the discussion of the behaviours of physicians toward patients, most notably verbal behaviours. The first perspective addresses core beliefs. Core beliefs are shaped by the physician's central philosophy regarding the processes of disease and healing, usually conceived of within the reductionistic medical model outlined above. The "voice of medicine" versus the "voice of the life world" of which Mishler speaks, for example, refers to the expression of these core beliefs, the very different orientations from which physicians and patients talk and think about health (Mishler, 1984).

The second perspective views the physician-patient relationship as a consequence of the roles that each party enacts towards one another. How and what one says in a dialogue is, in part, role determined (reminiscent again of symbolic interactionism). The nature of the relationship and the resulting communication behaviour will change depending upon the role position that both physician and patient take, although it is the physician who usually has more control given the function of the setting and the power differential between the two parties.

The third perspective views the physician-patient relationship as a consequence of how physician and patient behave toward one another at a verbal level. Here, the psychological and communication skills of the physician are critical. Success in interaction is more likely if the physician can accept and utilize the knowledge that the thought and
articulation processes of the physician and patient are essentially different, and vary across individuals for both groups. The physician and patient have, in essence, different world views of health and illness: the patient comes from a personal experience of illness which includes lifestyle consequences, fears, and altered roles that can only be appreciated through the telling of her/his personal story; the physician comes from a background of schooling that has ingrained unique vocabulary (resulting in particular discourse patterns) and problem-solving techniques (e.g., a decision-tree approach to diagnostics).

These perspectives are informed by theories in psychology and sociology and have relevance for analyzing the interaction between audiologist and patient. A number of valuable studies have approached health communication from a primarily sociolinguistic perspective in a wide variety of care-giving contexts (e.g., Coupland, Robinson & Coupland, 1994; Nussbaum, 1990; Street, 1991) and, as discussed earlier, in various sub-populations of patients such as the elderly (e.g., the work of Ryan et al., 1986). To date this multi-disciplinary health communication perspective has not been applied to the study of the audiologist-patient interaction, except for a recent study by Coupland and Jaworski (1997).

Coupland and Jaworski (1997) recorded an interaction between an audiological physician and a patient and analyzed it to illustrate various theoretical perspectives on the social dimension of communication. The audiological physician used a highly ritualized interview format of question-answer-question to establish the nature, causes and solutions to the patient’s hearing problems, but it was noted that this transactional mode frequently gave way to a more relational, interpersonal style of communication. As predicted by communication accommodation theory and relevance theory (Sperber & Wilson, 1986), examples from this study showed how both audiologist and patient accommodate their speech to each other and attempt to make comments or questions as mutually relevant or interpretable as possible. In addition, the frequent shift of the audiologist away from the medical frame (analogous to the concept of role described above) to the relational one illustrated what Coupland et al. (1994) describe as “complex processes of frame negotiation, where doctors and patients blend their socio-relational and bio-medical priorities” (p.94). Thus, a serious medical (transactional) frame may shift to a joking
personal (relational) frame as a way to build rapport and trust in a context where painful disclosures or examinations may be necessary. Coupland and Jaworski (1997) emphasize the importance of the social dimension of communication in the medical or audiological context, and that illustrate that theories of communication may help to elucidate the relevant cognitive processes that support the goal of sharing meaning between clinician and patient.

Only a small number of other studies of audiologist-patient interaction have been reported in the literature. Doyle (1994) examined aspects of patient-clinician interaction in audiology by documenting activity as it naturally occurs in the clinic. Initial consultations of fifty adult patients (mean age 73.8 years) with ten audiologists in Australian government hearing clinics were audiotaped in a study of the behaviour of audiologists and their patients who were in the initial stages of rehabilitation. Recordings were analyzed to determine how consultation time was used, and what questions patient and clinician asked, and to characterize interpersonal aspects of the consultations. A profile of clinical interaction emerged in which patients appeared largely passive. On average, audiologists asked four times as many questions as patients, with "direct requests for information" comprising just under half the total number. Doyle (1994) states:

Question asking by audiologists and clients indicated the apparently different agendas for the two participants. Audiologists' requests for information reflected their orientation to the task of documenting the client's hearing loss and moving to the yes or no hearing aid decision. Clients' requests for information reflected a need for knowledge about the use, benefit, and appearance of hearing aids. Consistent with their generally passive role, clients often directly solicited audiologist opinion in decision-making. (p. 224)

Results indicated that all ten audiologists tended to have a routine method of presenting information (e.g., six out of ten used the patient's audiogram as the focus of their informational counselling), a finding consistent with survey data obtained by Martin, Adabie and Descouzis (1989a) who reported that audiologists in both the United States and Australia "appear primarily to proceed in standard and preset ways in conveying what is considered to be important information" (p.50). Audiologists also displayed a conversational style that appeared to "tempt" or convince the patient to accept
amplification (e.g., “You wouldn’t have to wear it all the time”, p. 221). Despite these similarities, an interesting finding of the study by Doyle (1994) was the variation in consultation characteristics across the ten audiologists along four dimensions: total consultation time, proportion of consultation time in which talk occurred, proportion of consultation time devoted to hearing assessment, and the number of patients’ direct request for information. The author posits that “the individual clinician may have a powerful effect on hearing aid rehabilitation processes and, perhaps, outcomes” (p. 224), and she suggests that such potential effects should be the focus of further study.

A second study (Kargas & Doyle, 1996) looked at patient satisfaction with the use of time in initial audiological consultations (assessments) with patients of all ages at two urban Australian audiology clinics (for patients under 15 years of age, the accompanying parent was the subject). The basic research question was: “Does patient satisfaction with the experience of participating in an audiological consultation vary with: 1) total consultation time; 2) time spent on various forms of information transfer within consultations (e.g., history taking, informational counseling, or other talk associated with test instructions, greetings and rapport building); or 3) time kept waiting immediately pre-consultation?” Analyses of 60 audiotaped interactions that categorized and measured the time spent in each of the above activities were compared with patient responses to a satisfaction questionnaire (four-point scale) that was completed immediately following consultation. Results indicated that satisfaction ratings were generally high and that total consultation time and waiting time pre-consultation in relation to total consultation time contributed most to variation in patient satisfaction ratings (accounting for 42% of the variance). Only three patients out of 60 expressed dissatisfaction; these three had significantly longer waiting times (an average of 28 minutes) and shorter consultation times than satisfied patients (with waiting time of roughly nine minutes). Regardless of the length of the consultation, most time within a consultation in this study was spent on “other talk” (i.e., not history-taking or informational counselling), a finding that resonates with the comments of Coupland & Jaworski (1997) above regarding the importance of the social dimension of communication. Both Australian studies described above suggest the
need for further study of audiologist behaviours and the relationship of that behaviour to rehabilitation outcomes including client satisfaction and degree of hearing aid use.

**General Summary and Review of Research Questions**

The literature reviewed in this chapter has documented presbycusis as a growing health concern that has significant and wide-ranging psychosocial effects not only on the hard-of-hearing individual, but also on the family and friends of the individual. The coping responses persons deploy have been shown to mediate between the impairment of presbycusis and its psychosocial consequences. The literature suggests that coping styles and strategies (on the part of hard-of-hearing individuals as well as significant others), and their perceived effectiveness, also play a key role in one's self-assessment or perception of health status, which in turn may signal the need for help-seeking.

The literature on help-seeking, both with regard to hearing loss and more generally, highlights many factors that may help or hinder help-seeking. The way these personal and environmental factors combine is complex and varied. Generally, it is not the presence of symptoms per se that determine help-seeking, but how one interprets and responds to symptoms. There may be large variability in these responses, perhaps as a result of one's degree of attention to bodily states, and one's beliefs, values and attitudes about hearing and health. Social and psychological constructs inform empirical research by elucidating individual characteristics and personal attributes (e.g., beliefs and attitudes) that are posited to influence coping and help-seeking. Such predisposing factors are explored in theories and models of health behaviour, help-seeking and health services utilization, which also consider the role that enabling and reinforcing factors, predominantly environmental, play in help-seeking.

Theories and models of communication contribute to explaining how social and communicative roles, intents and expectations may influence coping and help-seeking, and how these factors may differ by gender and with aging. Such models and theories are just beginning to be applied to the special situation of the audiologist-patient interaction to determine this influence on help-seeking and rehabilitative outcomes. Broader issues
surrounding the nature of service delivery and its impact on help-seeking have not yet been considered in audiology. As well, there is a need to explore further gender and aging issues related to how these factors influence the help-seeking process. The diverse literature on help-seeking and health behaviour can inform audiology by corroborating help-seeking factors already documented in studies of hearing loss, and offering novel perspectives that may inform audiologic research, including the present study.

In summary, the path from impairment, through the range of particular coping responses, to the culminating help-seeking step of booking an audiologic appointment is influenced by a complex array of predisposing, enabling, and reinforcing factors from the micro (personal) to the macro (societal) level. Table 2.1 at the opening of this chapter listed some of the personal and environmental factors that play either an etiologic or moderating role in health and illness. Table 2.2, modeled after Table 2.1, focuses on the personal and environmental factors that the literature review in this chapter has revealed as playing a possible etiologic or moderating role in hearing loss, and factors that may act as determinants in help-seeking for hearing loss.

The present review of the literature has highlighted the methodological shortcomings of utilizing research designs that do not tap the intricacies and important subtleties of the dynamic, interactive, and long-term nature of the help-seeking process. The qualitative research approaches reviewed (in studies of oral health and hearing loss) revealed aspects of the help-seeking process that quantitative studies failed to uncover.

The findings of this literature review underscore the importance of an ecological approach to audiology, to mirror the shift toward an ecological view of health that is occurring in health research and practice more generally. An ecological approach to the study of presbycusis and help-seeking is one that contextualizes hearing loss within the real world situations of each hard-of-hearing individual. Moreover, within this individualized approach, the focus is on solving specific situations of handicap identified as problematic and salient by the individual, in conjunction with significant others.
### Table 2.2

**Personal and Environmental Factors in Hearing Loss and Help-seeking for Hearing Loss**

(Note: HL = hearing loss; HA = hearing aid; HOH = hard-of-hearing person)

<table>
<thead>
<tr>
<th>Biopsychobehavioural factors</th>
<th>Sociophysical environmental factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biogenetic</strong></td>
<td><strong>Sociocultural/physical</strong></td>
</tr>
<tr>
<td>Impairment:</td>
<td>Soundscape: range and salience</td>
</tr>
<tr>
<td>length of time</td>
<td><strong>Lifestyle</strong></td>
</tr>
<tr>
<td>rate of change</td>
<td>Communication:</td>
</tr>
<tr>
<td>symmetrical</td>
<td>acoustic factors of speech</td>
</tr>
<tr>
<td>amount of loss</td>
<td>linguistic and paralinguistic factors</td>
</tr>
<tr>
<td>type of loss</td>
<td>style e.g., accommodating</td>
</tr>
<tr>
<td></td>
<td>social factors e.g., roles, goals, salience</td>
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<tr>
<td></td>
<td>environmental factors e.g. bkngd noise</td>
</tr>
<tr>
<td></td>
<td>gender and age effects</td>
</tr>
<tr>
<td>Other health conditions</td>
<td><strong>Family members:</strong></td>
</tr>
<tr>
<td></td>
<td>pressure on HOH person to seek help</td>
</tr>
<tr>
<td>Mobility</td>
<td>social support e.g., in communication</td>
</tr>
<tr>
<td>Vision</td>
<td>coping responses</td>
</tr>
<tr>
<td>Cognitive deficits</td>
<td><strong>Attitudes:</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>negative: stigmatizing HL and aging</td>
</tr>
<tr>
<td>Age</td>
<td>positive: satisfied w HA, audiology</td>
</tr>
<tr>
<td></td>
<td><strong>Social roles:</strong></td>
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<tr>
<td></td>
<td>women</td>
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<tr>
<td></td>
<td>older adults</td>
</tr>
<tr>
<td></td>
<td>medical: physicians, audiologists</td>
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<tr>
<td></td>
<td><strong>Socioeconomic status; financial resources</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Technology e.g., ease of use of HA’s</strong></td>
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<tr>
<td></td>
<td><strong>Hearing health care system:</strong></td>
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<tr>
<td></td>
<td>resources</td>
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<tr>
<td></td>
<td>organization (medical model)</td>
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<tr>
<td></td>
<td>physicians: attitudes, referral and intervention style; follow-up access issues: service availability waiting list, referral process, location financial structure</td>
</tr>
<tr>
<td></td>
<td>Culture, ethnicity</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological</th>
<th><strong>Lifestyle</strong></th>
</tr>
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<tbody>
<tr>
<td>Self-concept: e.g.:</td>
<td>Communication:</td>
</tr>
<tr>
<td>: self-esteem</td>
<td>acoustic factors of speech</td>
</tr>
<tr>
<td>: autonomy</td>
<td>linguistic and paralinguistic factors</td>
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<tr>
<td>: sense of identity</td>
<td>style e.g., accommodating</td>
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<tr>
<td>: self-efficacy</td>
<td>social factors e.g., roles, goals, salience</td>
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<tr>
<td>: perceived control</td>
<td>environmental factors e.g. bkngd noise</td>
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<tr>
<td>Beliefs: e.g.,</td>
<td>gender and age effects</td>
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<tr>
<td>perceived severity of HL</td>
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<td></td>
<td><strong>Lifestyle</strong></td>
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<td>Communication:</td>
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<td>acoustic factors of speech</td>
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<td></td>
<td>social factors e.g., roles, goals, salience</td>
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<td>environmental factors e.g. bkngd noise</td>
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<tr>
<td></td>
<td>gender and age effects</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Behavioural</td>
<td><strong>Lifestyle</strong></td>
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<tr>
<td>Coping responses:</td>
<td>Communication:</td>
</tr>
<tr>
<td>: problem-based</td>
<td>acoustic factors of speech</td>
</tr>
<tr>
<td>: emotion-based</td>
<td>linguistic and paralinguistic factors</td>
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<tr>
<td></td>
<td>style e.g., accommodating</td>
</tr>
<tr>
<td></td>
<td>social factors e.g., roles, goals, salience</td>
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<td></td>
<td>environmental factors e.g. bkngd noise</td>
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<td></td>
<td>gender and age effects</td>
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<td><strong>Talked to doctor re: hearing</strong></td>
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<td></td>
<td><strong>Beliefs:</strong></td>
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<tr>
<td></td>
<td>perceived severity of HL</td>
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<td></td>
<td>perceived efficacy of HA’s</td>
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<td>perceived efficacy of coping beh.</td>
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<td></td>
<td><strong>Attitudes:</strong></td>
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<td></td>
<td>toward HA’s</td>
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<td></td>
<td>health services</td>
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<td><strong>Communication:</strong></td>
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<td></td>
<td>goals,</td>
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<tr>
<td></td>
<td>importance</td>
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</tbody>
</table>

| Behavioural                   | **Knowledge:**                     |
|                             | HL, HA                              |
|                             | other solutions,                    |
|                             | service delivery                    |
The purpose of this research study is to qualitatively explore, within an ecological framework, four perspectives identified in this literature review as warranting study or more in-depth study. Specifically, these perspectives are: 1) the perspective of hard-of-hearing older women on their hearing, hearing loss, coping responses, and help-seeking, elicited at the point in time when a help-seeking step is taken; 2) the perspective of family members and their role in how presbycusis is experienced within the family and in help-seeking; 3) the perspective of hard-of-hearing individuals on the audiology system, including their expectations of their first interaction with an audiologist, their impressions and interpretations of the interaction and its outcomes, and an exploration of how the system of audiology service delivery may influence further rehabilitative action for presbycusis; and, 4) the perspective of the assessing audiologist and the nature of her interaction with these women and the service delivery system within which she plays a crucial role.

The next chapter will discuss methodological issues related to these broad areas of inquiry.
CHAPTER 3

METHODOLOGY

Overview

This chapter outlines the methodological strategies and procedures that were used in the present study. The chapter moves from the general to the specific. It begins with a discussion of qualitative methodology and the rationale for adopting a grounded theory approach. Details of the study design follow, including information about the sample and the setting, the recruitment of participants, and the nature of the data. The techniques and process of data analysis are then described. The chapter closes with a discussion of ethical issues and the criteria for assessing the quality of the study.

The main purpose of this research was to explore the perspectives of older women on their hearing, their hearing problems, and help-seeking related to their hearing. These perspectives were examined retrospectively and prospectively in the weeks leading up to and following each woman's first audiologic appointment. While the focus was on these women as the core participants, a secondary purpose of the research was to explore the perspectives of a close family member and the audiologist who assessed the core participants. In particular, the audiologic appointment was a focal point at which the interaction between each woman as a patient and the audiologist who evaluated her hearing for the first time was explored.

As highlighted in the previous chapter, several aspects of the study design are unique. Very little information on the psychosocial aspects of hearing loss has been gained prospectively. The views of significant others are seldom solicited in studies. There are few studies that focus on the perspectives of women, and none of which I’m aware that have looked at help-seeking for hearing problems by older women. Moreover, research on the clinician-patient interaction has been almost non-existent in audiology. For these reasons, it was anticipated that this study would be important for the potentially significant
contribution it could make to the knowledge base. The following section presents the rationale for choosing a qualitative approach, and in particular grounded theory methodology.

**Qualitative Methodology**

The landscape of health research is changing, reflecting fundamental shifts in philosophy on the part of health practitioners, researchers, and policy-makers. Two such shifts that have occurred are: 1) in how health is defined and measured, and 2) in how the relationship between researcher and research participants is viewed. Perhaps the greatest barometer of change in how health is defined and measured is the development of the International Classification of Functioning and Disability, the ICIDH-2, by the WHO, as was described in the previous chapter (ICIDH-2, 1999). The ICIDH-2 represents a fundamental paradigm shift away from an earlier emphasis on “disease” (WHO, 1980) and toward a bio-psycho-social model of health that recognizes the importance of contextual and environmental determinants of health and the dynamic relationship between the individual and her/his social and physical environment. The ICIDH-2’s focus on health rather than disease, function rather than dysfunction, and the person-in-context rather than the disease in isolation reflects both a new social understanding of disability and a response to changes in the provision of health care. It may be hypothesized that there is a parallel relationship between these changes and the increasing use of qualitative methods in research.

The second shift listed above is the recent recognition of the voice of the patient as a health research participant. Research in the social sciences has for some time employed qualitative methods to listen to the voice of those most familiar with the subject matter at hand. In contrast, the influence of biomedicine,

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1 For example, “action research” in its various forms has been implemented for many decades in the social sciences, often employing qualitative methodology (Reason, 1994). Action research is defined as social research where researchers and stakeholders define the research question and cogenerate relevant knowledge toward implementing social change (Greenwood & Levin, 1998).
with its emphasis on positivism, technology, and treatment intervention has prevailed in health research. Only recently has the perspective of the research participant, the recipient of health care services, been given voice, assisted in part by qualitative research methods (Miller & Crabtree, 1994).

Qualitative research is also termed “naturalistic inquiry” (Denzin & Lincoln, 1994, p. 4). It is well suited to uncover relationships between individuals and their ecological contexts because it accounts for the influence of environment rather than controlling for its effect in study design, data collection or analysis, as would be the case in quantitative research. Qualitative research takes many forms, most of which have the following features in common (as outlined by Miles & Huberman, 1994). The research involves intense and/or prolonged contact with a “field” or life situation, typically an “everyday” life situation of individuals, groups, societies or organizations. Using an inductive rather than a deductive approach, the researcher attempts to capture the perspective of local actors “from the inside” and explicate the ways people in particular settings come to understand, account or, take action and otherwise manage their day-to-day situations. Little standardized instrumentation is used to gather data, with the researcher being the main "measurement device" in the study. Finally, much of the data and the product of most analysis consist of words, rather than the graphs and numbers common in quantitative research.

As the literature review in Chapter 2 noted, very few qualitative studies have been undertaken in audiology. Not coincidentally, such studies have been conducted by researchers and practitioners who advocate an ecological approach to the practice and study of audiology. Such an approach considers the person-in-context, where contextual factors may include interpersonal, organizational, and societal influences. Examples of audiology research groups engaged in qualitative study have been mentioned in the review of the literature: Hétu, Getty, Gagné, and colleagues in Montréal (Hétu, Getty & Waridel, 1994; Hétu, Jones & Getty, 1993; Héhu, Riverin, Lalande, & St.Cyr, 1988) and Hallberg and associates in Sweden (Hallberg & Carlsson, 1991; Hallberg & Jansson, 1996). The methodology of the
Montreal group has concentrated on in-depth interviews and focus groups using primarily a phenomenological approach to describe the meaning of hearing loss in the lives of participants. Hallberg and colleagues have adopted a grounded theory approach and have combined qualitative with quantitative methods.

The choice of research strategy among the various forms of qualitative approaches is determined by the purpose of the study, the nature of the research questions, and the resources available to the researcher (Morse, 1994). For example, phenomenology would be the method of choice if the research question concerns the meaning of a phenomenon, or the essence of the experience. If the question concerns describing the nature of a phenomenon, then answers are best obtained using ethnography. If the questions concern an experience and the phenomenon in question is a process, then the method of choice is grounded theory (Morse, 1994). The next section explains the rationale for the choice of grounded theory in the present study.

Grounded Theory

Grounded theory is a qualitative methodology that uses systematic and well-defined procedures to develop an inductively derived theory about a phenomenon (Strauss & Corbin, 1990). In grounded theory methodology, data collection, analysis and eventual theory stand in close relationship to one another (Strauss & Corbin, 1998). A theory is a set of interrelated concepts; definitions, and propositions that present a systematic view of events or situations by specifying relations among variables, in order to explain and predict the events or situations (Glanz & Rimer, 1995). With a grounded theory approach, the researcher does not begin a study with a preconceived theory in mind, but rather allows theory to emerge from the data. Grounding concepts in data is a main feature of this method; the theory emerges from the data and the data is used to illustrate, or ground, the theory (Strauss & Corbin, 1998). In the development of such theory, there is a continuous interplay between the data collected and its
analysis; thus, grounded theory methodology is often referred to as the "constant comparative method" (Strauss & Corbin, 1998).

The development of grounded theory was influenced by the theoretical traditions of sociology and social psychology, in particular the symbolic interactionist tradition of the Chicago School of Sociology, which itself arose out of the philosophical perspective of pragmatism (Mead, 1934). The theory of symbolic interactionism has three basic premises. First, humans act toward objects (objects may be concrete things or abstract ideas) and other humans on the basis of the meanings that these objects hold for them.\(^2\) Second, these meanings arise out of social interaction. Third, meanings are not fixed but may be modified by humans as they interact with and interpret objects. This perspective also includes points raised in the previous chapter: 1) persons are actors who take an active role in responding to situations; 2) the various "roles" persons play, or "careers" they move through, differ in different social settings; 3) "careers" have two sides to them, the public, accessible side and the private, internal side that is linked to images of self and identity. As Strauss (1969) asserts, the central object to be negotiated in interaction is identity of self.

In summary, symbolic interactionism focuses on interaction; interaction is a process; a process is by definition dynamic, not static; and central to the evolving meaning in interaction is the concept of identity. As the literature on presbycusis reveals, the psychosocial effects of presbycusis and individuals' responses to these effects hinge on issues that also involve interaction, process, and identity.

Grounded theory, with its roots in symbolic interactionism, is well suited to the present study of hearing loss over time as it relates to initial help-seeking in older women. The quotation below (from Fife, 1994) is about symbolic interactionism in the conceptualization of meaning in illness. By substituting "hearing loss" for "life-threatening illness" it may be seen how this approach and

\(^2\) One definition of "meaning" is an individual's perception of the potential significance of an event for the self and one's plan of action (Fife, 1994).
grounded theory methodology may yield comparable benefits in the study of presbycusis:

Symbolic interactionism...links the perception of self, the social context, cognition and behavior so that the role of meaning in persons' responses to the disruption of life that results from the occurrence of a life threatening illness can be more clearly understood. It provides the framework for understanding the reciprocity between the individual's internal response to the crisis of a life-threatening disease and the ways in which that response is modified by interaction with the social world. Subsequently, based on this theoretical perspective there is the possibility that the meaning persons associate with their illness and its treatment could serve as a clinical marker, and provide some indication of the quality of adaptation persons will be able to achieve. (p.316)

Grounded theory is a way of thinking about and conceptualizing data that is particularly suited to experience-oriented and process-oriented research questions (Morse, 1994). A grounded theory approach is often the method of choice in studies of chronic health conditions. In fact, it was through Glaser and Strauss's substantive research of chronic illness and dying that many of the tenets of grounded theory were developed and applied by its authors (Glaser & Strauss, 1975).

Table 3.1 provides a synopsis of the rationale for using grounded theory in this investigation.

Grounded theory emerged as the methodology best suited to this study as a result of the following factors: the nature of the research area, the research questions, and the researcher's interest not only in describing phenomena but in developing substantive theory to explain those phenomena.
Table 3.1
Rationale for Using a Grounded Theory Approach in the Present Study

<table>
<thead>
<tr>
<th>Conditions Consistent with Grounded Theory</th>
<th>The Present Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Process” questions: experience over time or change</td>
<td>Explores the experience of presbycusis and help-seeking over time</td>
</tr>
<tr>
<td>Interest in patterns of action and interaction between</td>
<td>Study of presbycusis involves study of patterns of interaction; perspective of family member and audiologist are included</td>
</tr>
<tr>
<td>and among various types of social units (i.e., “actors”)</td>
<td></td>
</tr>
<tr>
<td>Data sources include interviews, participant observation, journals, fieldnotes, and memos</td>
<td>Data sources are interviews, participant observation, fieldnotes and memos</td>
</tr>
<tr>
<td>Emphasis on substantive theory development arising from substantive research topic</td>
<td>Interest in building theory from substantive data to explain research phenomena for population studied</td>
</tr>
</tbody>
</table>

The Study Design

The following discussion of study design covers three main topics: the sample and setting, how participants were recruited, and the nature of the data.

The Sample and the Setting

The total sample in this study included older women (the participants), one close family member for each woman, and the assessing audiologist, who was the same for all women.

Participants

The core sample comprised women from an urban centre on Vancouver Island, British Columbia. Anticipating that each participant would have a unique story to tell
about her hearing, I aimed to reduce the effect of confounding variables on my results by choosing as homogenous a sample as possible. My sampling strategy included setting specific criteria for participation in this study. These inclusion criteria were that each participant 1) be age 55 years or older; 2) have no prior hearing aid experience; 3) have had no hearing test (conducted by an audiologist) within at least five years; 4) have English as her first language and 5) live independently in the community, preferably with at least one other person. Each woman selected 6) was to have no serious medical condition or cognitive impairment that would affect her participation in the study. The final criterion was that, 7) according to either the referring physician or my judgment based on screening questions, the reason for booking the appointment with the audiologist was for assessment of presbycusis uncomplicated by other significant symptoms such as severe tinnitus, dizziness, or middle-ear problems.

In total, seven women participated in this study. These seven women ranged in age from 72 to 82 years. Three of the women lived with their husbands, and four lived alone. None of the women had ever had her hearing tested by an audiologist, except one who had had an audiologic assessment seven years previously and a recent hearing screening test by her ENT. One other woman had also had her hearing screened by an ENT two to three years previously.

Family Members

Six of the seven participants gave their consent for me to interview a family member. Thus, in addition to the core sample of seven older women, I interviewed three husbands and three daughters. Although I broached the topic of interviewing a family member over several interviews with one participant, she continually stressed that her family who lived nearby (son and granddaughters) were “too busy” to be available.
The Audiologist and the Audiology Setting

I also collected data from the audiologist who assessed the seven participants. Specifically, I had a fifteen to twenty minute interview with the audiologist no later than 24 hours after her assessment of each participant.

There were three criteria that guided my search for an appropriate audiology setting for this study. The first was dictated by research design: in order to have the opportunity to contact and interview participants twice before their audiology appointment, I needed to work with a setting having at least a two-week waiting period for assessments. Second, I required a setting having a sufficient caseload of patients with presbycusis to permit data collection within a reasonable time (six to eight months). Third, I wished to work with an audiologist who provides high quality service and who has had many years of experience working with persons who have presbycusis.

The audiologist chosen for this study has had her own sole-charge private practice at the same location for over a decade. She is a clinical faculty member at the University of British Columbia (UBC) School of Audiology and Speech Sciences for which she supervises audiology student interns. As such she is considered on the basis of observation by UBC faculty to provide exemplary audiologic service. I chose to work with only one audiologist to maintain consistency of testing across participants.

Audiology Service Delivery in British Columbia

Audiologic services to adults in the province of British Columbia, Canada, are provided through public and private facilities. However, because the priorities of public facilities are testing children, difficult-to-test populations, and advanced diagnostic testing, the vast majority of persons with presbycusis are seen by private-practice audiologists. It is not necessary to have a referral from a physician to make an appointment. There is no public funding of hearing aids for adults (except for those on social assistance). Audiologic assessments are provided at no charge if conducted at a public facility; there is no public funding for assessments conducted at a private facility. The audiologist who participated in the present study charged $50 for a one-hour assessment (a fee similar to that charged...
by other private-practice facilities). If the assessment resulted in a hearing aid fitting, this charge was applied as a credit against the purchase price of the aid.

Recruiting Participants

I worked with the booking secretary at the audiology setting to recruit participants. I discovered that this secretary obtains few details of the patient’s background information when she books appointments. She usually asks only the patient’s name, phone number, and whether the appointment is a first visit. I was in telephone contact with the secretary every few days to check on appointments that had just been booked to determine if there were new potentially eligible participants. The secretary telephoned prospective recruits, and asked for their permission for me to contact them. In my subsequent telephone conversation with the women who agreed to allow me to phone them, I explained the purpose and value of my study and asked screening questions to determine if they met the study criteria. In total, 15 women were telephoned. Five of these women did not meet one or more study criteria (i.e., two were already hearing aid users, one was too young, one appeared to have significant tinnitus, and one was in poor health). Three women declined to participate due to lack of interest (1), concerns about confidentiality (1), and because a spouse was quite ill (1). I arranged a first interview with each of the seven participants who took part in this study after determining that each of these women met the criteria for inclusion in the study, expressed genuine interest in participating, and had, I felt, a clear and realistic understanding of what would be expected of her as a participant in the study. All seven participants completed the study.

Only two of the seven participants accepted the $125 honorarium that was offered at the end of the last interview.

3 After briefly explaining the study and my background, I asked each potential participant questions in the following order to determine whether study criteria were met: 1) are you 55 years or older? 2) have you ever tried a hearing aid? 3) have you ever had your hearing tested by an audiologist? (if yes, I tried to determine whether this was more than 5 years ago) 4) do other family members live with you? (I phrased this question about living situation thus to be as non-threatening as possible re: security); 5) how is your health? (to determine if there were other medical conditions that would preclude participating). 6) My last question was to confirm that English was the first language.
Nature of the Data

The data collected were of several forms: semi-structured interviews with the participants, their family members and the participating audiologist, participant observation of each audiology assessment, and documents. The documents themselves took several forms: a written journal and questionnaire completed by each participant, the clinic “client intake history” form completed by each participant at the audiologist’s office prior to the hearing assessment, the audiologic test results provided by the audiology facility, and my notes and memos related to the research project. A description of each of these forms of data collection follows.

Interviews

Much effort in the research planning phase was devoted to designing the schedule and structure of interviews. Interviews were the main form of data collection, thus I was careful that they be conducted in a fashion that would facilitate information gathering while allowing me to establish and maintain rapport with each participant. Interviews also offered me the opportunity to informally assess a participant’s or family member’s hearing and her/his communication style and strategies.

The first two participants in this study, Cheryl and Phyllis⁴ were at first considered pilot participants with whom the study design was tested. The only change made to the design related to the issue of validity, which will be described later in this section. Cheryl and Phyllis were therefore retained as participants.

Appendix A outlines the schedule of interviews for each participant, family member and the audiologist. Interviews 1 and 2 were held before the participant’s audiology appointment. Interview 3 was the “post-audio” interview, conducted for most participants immediately after the audiology assessment. I continued interviewing a participant until I felt that the data collection process was “saturated”, that is, the same

⁴ To maintain confidentiality in writing about this study, I assigned each participant a pseudonym: P1 is Cheryl, P2 is Phyllis, P3 is Janet, P4 is Marjorie, P5 is Frances, P6 is Louise, and P7 is Betty.
information was being repeated frequently and no new information was forthcoming on topics initiated by the participant or me. This was confirmed in coding and analyzing the data, in that at a certain point no new properties, dimensions or relationships emerged (Glaser, 1978, p. 53; Strauss & Corbin, 1998, p. 136). For most of the women, this point was reached by the end of interview 4; for two women, a fifth interview was held.

In total, 29 interviews were held with the core sample of seven women, six interviews with family members, and seven interviews with the participating audiologist. The interviews spanned the time from the first meeting with the participant which took place between six and eighteen days before the audiology appointment, to the final interview which took place between twenty and forty-two days after the audiology appointment.

**Interviews with participants**

Interviews with participants were held in their homes (in either the dining area or the living room) and lasted between forty-five and ninety minutes. The exception was interview 3, held right after the audiology appointment, which took place in a small restaurant next to the audiology clinic and lasted about thirty minutes. All interviews were semi-structured. An interview guide for each interview was prepared (discussed further below). All interviews were audiotaped and I subsequently transcribed them in detail. Topics within and across interviews ranged from general to more specific and from less personal to more intimate. Beyond the first interview, the questions drew upon data from prior interviews whenever I wished to expand upon a participant’s earlier comment or when I felt that gaps remained in my understanding of a participant’s previous responses to the same or similar questions. I revisited many questions from interview to interview to confirm or add to participants’ original responses. To enable data analysis to accompany data collection, I arranged as wide a time as possible between interviews so that I could thoughtfully listen to each audiotape, and in most cases analyze a first-run transcription of it before the next interview.
The interview guides are provided in Appendices B to F. Interview 1 (Appendix B) focused on the woman's personal background, lifestyle and activities, her description of her health, her hearing and hearing problems, her coping style and strategies, and her experience with other health professionals. One important question raised was how the participant's appointment came to be booked at this point in time. Interview 2 (Appendix C) explored this question further, and also looked at the participant's expectations and hopes for the audiologic assessment, her knowledge of audiology and audiologists, and her knowledge of hearing aids.

Interview 3 addressed questions related to the audiology assessment: reactions to the test procedures and the test results, understanding of test results, how well expectations were met, and overall impressions of the test (see Appendix D). This was the most “structured” of the interviews, in that my goal in this interview was to explore specific issues related to the just-completed assessment. I felt it was important to talk with the women as closely as possible to the time of the “event”, yet I did not wish to tire participants with a lengthy interview on the heels of an hour-long assessment. In two cases, a participant's husband accompanied her to the test and sat in on the audiologist’s post-test consultation as well as my post-test interview, so that I was able to direct the occasional off-the-cuff question to him.

Interviews 4 (and 5 when held) were held roughly from one to six weeks “post-test”. In general, in these interviews participants were asked once again to give their interpretation of their test results and their feelings about those results. We also discussed what action, if any, they intended to take from that point on and the reasoning behind those intentions. Beyond these questions, the topics covered in interviews 4 and 5 were more varied across participants than in other interviews because, by this point, much ground had been covered. Participants by this point gravitated toward topics they wanted to expand upon, and I revisited certain questions that “nagged” at me for elaboration or clarification, because the answers previously obtained were either unclear, incomplete or contradictory. There were two features that the last interview had in common for all participants. First, I made a point to ask each woman about the experience of taking part in this study. Second, in the final forty minutes or so of the final interview, I asked each
woman to provide feedback to me on a list of specific points that reflected, to that date, my analysis and interpretation of their responses to my questions. This synopsis was organized into four sections to facilitate discussion: participants’ thoughts on their hearing, booking the hearing test, the hearing test results, and hearing aids.

The request for feedback to the synopsis was the only change from the original pilot design (mentioned above). The original plan had been for each participant to be given the opportunity to review the transcript of each of her interviews to verify their accuracy. The pilot participants, Cheryl and Phyllis, were offered this opportunity but declined, stating that they felt that some of their answers to questions may have changed over the course of the study and that they didn’t feel the need to go over the interviews in written form. Therefore, the decision was made to review a synopsis of the analysis and interpretation of earlier responses in the final interview rather than asking participants to review transcripts. This modified procedure was in fact used for Cheryl and Phyllis as for the subsequent participants.

There were several advantages to conducting interviews at participants’ homes. Speaking to these women on their own “turf” seemed likely to put them more at ease, and placed them in a familiar and preferential “acoustic” setting for talking to an unfamiliar communication partner. For my part, I welcomed the opportunity to observe where these women lived and to thereby gain insights into their lifestyle and daily acoustic environments. It also afforded me the chance to observe the interaction between that participant and other family members, who were not present for interviews with the participant, but who frequently passed through the room where we were talking. As soon as possible following each interview, I wrote field notes on my observations (described under “documents” below).

I felt there was a sense of closure with each participant at our final interview as my questioning and our interaction drew to a close. I requested the opportunity to keep in contact with each woman informally following the study, in order to follow up on any questions I might still have arising out of my analysis of the data. They encouraged me to keep in touch. I subsequently contacted two of the women by telephone for a brief
conversation regarding their follow up action toward getting a hearing aid, and I documented the content of these calls in my field notes.

**Interviews with family members**

Interviews with family members were also semi-structured and audiotaped and lasted between twenty-five and forty minutes. My goal for these interviews was to gain the perspective of an important “other” on several key questions I had already posed to participants, while also offering them the opportunity to reflect openly on any aspect of their experience with their wife’s or mother’s hearing (see Appendix E). I was most interested in their description of their mother’s or wife’s hearing, how long they had noticed problems, what kinds of problems they noted, how they reported their wife or mother to be coping with hearing challenges, and their impression of how the audiology appointment came to be booked. Interviews with family members took place at participants’ homes (with one exception where I interviewed a daughter in her own home). I did try to make it clear that I wished to speak alone with family members; nevertheless, participants were present for a portion of these interviews, providing refreshments or socializing. This time together was an opportunity for me to observe the interaction between a participant and her spouse or daughter. Notwithstanding this time together as a “threesome”, I felt overall that I had a sufficient period of time alone with family members to ask them pertinent questions with participants out of “earshot”. Moreover, I did not feel that family members censored their answers to my questions because their wife or mother was present.

**Interviews with the audiologist**

The interview I had with the participating audiologist following her assessment of each participant lasted fifteen to twenty minutes and focused on her perspective of the patient (participant) she had just tested and the assessment process. It explored her perceptions of the patient’s expectations for the test and how well she believed they were
met, her own expectations, and other impressions (see Appendix F). These interviews were held in the audiologist's office, except for one interview conducted by telephone the day after the assessment because scheduling difficulties on the test day did not allow the audiologist to take time for the interview any sooner. This telephone interview was the only interview not audio-taped; instead, detailed notes of the audiologist's comments were taken and later typed and subjected to analysis.

Participant Observation

Each participant gave her consent for me to attend, observe, and audiotape her audiology appointment from start to finish. The audiologist also agreed to this. Each audiologic assessment took on average one hour to complete. To be as unobtrusive as possible, I arrived before the appointment to set up the tape recorder on the test side of the sound booth next to the monitor speaker on the audiometer so that both the participant's and the audiologist's speech could be recorded. (For my first participant, I placed the tape recorder on the participant's side of the booth, which had the disadvantage of recording only the participant's voice during the portion of the testing conducted under earphones). I sat as inconspicuously as I could on the audiologist's side of the booth in the corner nearest the door on a short stool, without compromising my view of the participant during her assessment. Figure 3.1 illustrates the set-up for the audiologic assessment, participant observation and recording.

I talked with the audiologist only when she initiated conversation with me as she conducted the testing. I remained as observer on the audiologist's side of the booth when the audiologist moved into the booth to be with the patient for the post-test counselling session. Throughout the assessment, I jotted down notes of observations regarding aspects of the test procedures, environment, participant behaviour, or the interaction between audiologist and participant/patient that would not be captured on the audiotaped recording. These were later reviewed and coded as data. Some of these observations also generated questions that I posed to a participant after her assessment; for example, after
observing that Louise whispered her responses to the audiologist's questions during her test, I made a research note of this and asked her about this particular behaviour in our next interview.

Documents

Documents in this study were of five forms: a journal with regular entries by each participant, a questionnaire completed by each participant, a "client intake history" form completed by each participant, audiologic results on each participant, and the notes of the researcher.
Journal

As part of the study, each of the seven core participants was asked to keep a daily journal of thoughts related to her hearing. A small, hardcover, lined journal was provided to each participant, along with an instruction sheet (Appendix G) that I reviewed with each woman at the end of the first interview. Each time I saw a participant, I always asked her how her journal writing was progressing; occasionally this triggered the participant to read excerpts or make comments based on what had been written. The journals were returned to me at the last interview and subsequently analyzed.

The “Communication Profile for the Hearing Impaired”

Each participant was also asked to complete the Communication Profile for the Hearing-Impaired (CPHI) at her convenience. The CPHI is a lengthy self-assessment questionnaire (Demorest & Erdman, 1987) with 145 items in three parts. The goal of the CPHI is to describe the communication performance, communication environment, communication strategies, and personal adjustment of hard-of-hearing adults, as well as the hard-of-hearing person’s views of the attitudes and behavior of others toward him or her. My purpose in having the women complete this questionnaire was to compare one quantitative measure of the psychosocial issues being explored with the qualitative findings. The CPHI was chosen from a roster of dozens of self-assessment instruments that are available because of its relative popularity and purported psychometric refinement. The CPHI was given to participants at the end of the first interview and returned to me in person by the last interview.

“Client Intake History” form

The participating audiologist utilized this one page form (see Appendix H) to obtain information about the patient’s history in terms of general medical and specific ear-related problems, and to learn a bit about the patient’s hearing difficulties. Question
"Whose idea was it to have an audiological evaluation?" was of particular relevance to this study. Each patient (participant) completed this form in the audiologist's waiting room before her appointment began. The audiologist used the form as a starting point in her discussion with the patient in the sound-booth, before starting the audiologic assessment. She made notes on this form of any relevant comments made by the patient relating to the questions on the form. The audiologist provided a copy of the completed form to me following each appointment. I was interested in seeing how well the written answers of participants on the form matched their comments to me in interviews or in their journals.

Audiologic results

The participating audiologist also made available to me copies of the audiological results for each participant whose assessment I attended. These included the results of pure tone testing by air and bone conduction, speech recognition (reception) testing, word recognition testing in quiet or with background noise (with incorrect responses to each test word noted on the test form), and the results of a test to determine the patient’s most comfortable and uncomfortable loudness level (see Appendix I for a sample of test results). The results of a test of middle ear function (tympanogram) were also included for two participants whose history suggested possible middle-ear dysfunction. The audiologist wrote comments about the patient’s or her own subjective impressions during testing, e.g. "left ear sharper". A description of the hearing testing procedures is provided in Appendix J. A glossary of audiologic terms and information on how to read an audiogram is provided in Appendix K.

Researcher's notes

From the time I was notified by the audiology facility of my first potential participant, I kept a journal in which I recorded my thoughts, observations, and ideas related to this study. Many entries in the journal were related to matters relative to the interviews with participants, such as a description of the physical setting of the interview,
my observations of a participant’s personality, how I felt the interview and our interaction went, and other points. These entries were considered to be data. Frequently, a participant made very interesting comments between the time the tape recorder was turned off and when I was at the door to leave. I tried to capture these comments in my journal as soon as possible (usually in my car before I drove away). I also made notes in my journal regarding aspects of or incidents in my own life, for example my mood or my baby daughter’s teething that kept me up all night, which may have affected the data collection process.

A second important set of “notes as data” were the notes I made on interview transcripts to mark communication breakdowns in conversation with a participant. Wherever I noted a breakdown (a significant proportion of which usually occurred just after I asked a question), I made a note in the margin of the transcript. These were not formally analyzed or tallied. Although I did not undertake a discourse analysis of these breakdowns, I considered them important because their occurrence or absence gave me a taste of a participant’s ease or difficulty comprehending in a favourable listening environment. It was interesting to compare these breakdowns across participants (e.g., variation in number of breakdowns) and also to note how the observed breakdowns in conversation were sometimes at odds with a participant’s report of how well she heard one-on-one.

This completes the description of the various data sources in this study. The next section describes how the data were analyzed.

Analytic Method

This section describes the data analysis procedures specific to grounded theory and how they were applied to the data collected in this study. The discussion begins with a description of the process of interview data transcription. Following this, an explanation of the coding process is provided using examples from the data of this study to illustrate the process. A discussion of memo-writing and how the findings are presented completes this section.
Data analysis consists of three forms of activity: data reduction, data display, and conclusion drawing or verification (Miles & Huberman, 1994, p.10). While the discussion below will describe each of these three activities sequentially, it should be kept in mind that, except at the very start of data analysis, these activities are iterative and interactive, not isolated and sequential.\(^5\)

The discussion begins with what I consider to be an important component of the activity of data reduction: transcribing the raw data.

**Transcribing Interviews**

The interview data collected comprised twenty-nine interviews with the seven participants of this study, resulting in approximately thirty-five hours of audiotaped recordings. Six interviews with family members of participants resulted in over three hours of audiotaped recordings, and seven interviews with the audiologist rendered another three hours of recording. In addition, each participant's audiologic assessment was audiotaped, resulting in seven more hours of taped recordings. In total, about forty-eight hours of audiotaped data were obtained.

I personally transcribed all of the interview data and the audiologic assessment data, except for portions of two final interviews that were transcribed by an experienced transcriber (and which I subsequently checked). Transcribing is a tremendously time-consuming task, taking upwards of eight hours per hour of interview. This process, however, was personally very rewarding. As a student of speech and language sciences

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\(^5\) Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions (Miles & Huberman, 1994, p.10).

\(^6\) In the course of my doctoral studies, I researched the merits and drawbacks of utilizing a software program (such as NUD*IST) to analyze data. I decided not to employ qualitative software to assist in data analysis for two main reasons. First, the feedback I received from other researchers convinced me that there was a significant learning curve in becoming familiar with such software programs, and I decided that for my first major qualitative undertaking I would rather spend those months immersed in the data of my project rather than in learning about the software. Second, it was the opinion of the seasoned qualitative researchers with whom I spoke that each software program deals with data in a slightly different way, and I felt uncomfortable at the prospect of introducing an additional lens to "view", and possibly influence, the interpretation of the data. Instead, I worked through the data using only the computer programs available within my word processor (Word 2000), such as the search and retrieve command for easy access to particular codes in my analysis.
with a special interest in discourse analysis, I strove to preserve as much detail as possible of the verbal and non-verbal interaction in the interviews. At the same time, I was acutely aware of what may be lost in the process of transducing auditory data to a written form. Doing a detailed transcription of an interview allowed me to get a feel for the discourse style of a participant in conversation, and for characteristics of the breakdowns in conversation that resulted, at least in part, from the participant’s hearing difficulty. It also provided some information on the reaction of, and strategies used by, a participant in response to conversational breakdowns. Transcriptions of the audiologic assessments revealed interesting discourse patterns in the interaction between the audiologist and the patient (participant). I adapted a notational schema for transcribing interviews that achieved the degree of detail desired, maintained quality and consistency, and resisted changes in text formatting. My notational system was extracted primarily from the work of Tannen (1984), and is described in Appendix L.

The slow line-by-line consideration involved in detailed transcribing stimulated many questions and insights about the data. This process constituted my initial analysis of the data. I made frequent memos to myself on these thoughts, which helped to frame questions and talking points for subsequent interviews with the same or another participant. Undertaking the transcribing myself shortly after the interview truly immersed me in the data so that I felt I achieved a more intimate connection with the data of each interview than if I had received a final printed product transcribed by someone else.

In qualitative inquiry, data analysis informs data collection (Strauss & Corbin, 1998). A first draft transcription was carried out as soon as possible following each interview. The focus of this first pass was on interview content that guided the next interview. This was especially important in looking at data from the first interview, because there were a number of questions about the hearing test that I wanted to pose or follow up on with a participant before her audiology appointment, and the second interview was the only opportunity to do so. As well, transcribing the interview data while

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7 It was beyond the scope of this study to conduct a detailed study of the discourse between the audiologist and patient (participant). In the future, I hope to undertake a formal discourse analysis of the audiologic assessments, particularly the pre-test and post-test portions, to study the relatively uncharted area of clinician-patient discourse.
the experience and flavour of collecting it were still fresh in my mind may have led to theoretical insights that may not have emerged otherwise (Patton, 1987, p. 140).

Coding of Interviews and Documents

In grounded theory, there is an interplay between induction and deduction in data analysis and theory building. Induction is utilized in working with the data, the words of study participants, to generate labels, or what are referred to as code names for all ideas present in the data. These code names, or labels, will eventually, through the process of constant comparison become the "concepts": the building blocks of theory. In the words of Strauss and Corbin (1998, p.103), a concept is "an abstract representation of an event, object, or action/interaction that a researcher identifies as being significant in the data." The process by which concepts are identified is called "open coding" (Glaser, 1978, p. 56), and the tags assigned to concepts are called "codes".

The concepts or codes identified in data analysis are abstract to varying degrees. Grounded theory organizes coding into three levels of abstraction. "Categories" represent the most abstract level of coding, the most central ideas that emerge from the data. Categories answer the big question "What is going on here?" The next level is less abstract, and involves coding data according to "properties". Properties are the general or specific characteristics or attributes of categories. The third and least abstract level of coding is by "types, circumstances, and conditions" otherwise termed "dimensions". Dimensions are characteristics of a property, specifying the range along which a property may vary.

As coding proceeds, the grounded theorist makes constant comparisons and asks questions in order to classify concepts as similar or different and to relate concepts to each other. The process by which concepts or codes are organized into different levels of abstraction is termed "axial coding" (Strauss & Corbin, 1998, p. 123). As concepts accumulate and are compared and related to each other, the analyst continues to work with the raw data to see how it fits with the emerging interpretation or classification of concepts. As concepts are named, sorted and classified a "theoretical (conceptual)
framework" begins to take shape; over time these concepts (whose names may evolve with the analysis) are grouped into categories, properties and dimensions. This may be viewed as a deductive component of data analysis, in that the theory that is evolving is guided by the ongoing analysis of the raw data, as well as by the researcher's experience with other research and theories.

A third type of coding, termed "selective coding" (Strauss & Corbin, 1998, p. 143), involves the process of integrating and refining the theory. Open and axial coding predominate in the early stages of analysis; later in the analysis, selective coding helps to integrate theory by relating the categories to each other and by identifying one central or core idea of the research, termed the "core category" (Strauss & Corbin, 1998, p.146). As mentioned earlier, data analysis is an iterative and interactive process involving all three types of coding. The analysis continues right into the final stages of writing up the theory. As Glaser (1978, p.7) states, "Grounded theory assumes that part of the method, itself, is the writing of the theory. The way data is coded, ideas are memoed, and memos are sorted are all partly focused on designing and facilitating the writing of the theory."

To summarize then, open coding labels categories, properties and dimensions, which represent the most to least abstract concepts identified in the data, respectively. Axial coding reassembles the data broken down in open coding by identifying linkages among categories and their properties and dimensions. Selective coding comes into play later in the analysis as the grounded theory starts to crystallize and a central or core category is identified for the purpose of integrating and concisely explaining the grounded theory.

Data Analysis in the Context of this Study

The voluminous amount of data collected and my initial lack of familiarity with the coding processes in grounded theory development resulted in two distinct stages in my analysis of the data from this study. These two stages represent two related approaches to the coding process. The first stage covered the time period from before the end of data collection in April 1998 until September 1998. These months were devoted primarily to
the activity of open coding. The first identification of concepts emerged as I transcribed the data. I kept longhand notes of concepts and insights that arose during transcribing. The in-depth analysis, or fracturing of the data, began in earnest with the printed "hard" copy of a transcript, starting with the transcripts of interviews. The unit of analysis could be a word, phrase, sentence, or entire paragraph. Wide margins on either side of each page of transcripts enabled me to write code names and notes in the margins. Two and three letter codes were chosen to be semantically related to the concepts they represented, for ease of identification. Coloured pencils were used to label code names, with the text that corresponded to a particular code underlined in the same colour for easy reference. Codes that were related conceptually to each other were coded in the same colour. For example, all references to "hearing aids", code HA, were coded in dark green pencil, even though a range of related codes applied (e.g., "negative aspects of hearing aids" "HAN", and "hearing aids as objects of mystery" "HAM" were both coded in dark green).

Operational definitions of codes were not explicitly set from the outset, but were defined over the course of data analysis as more and more transcripts were coded. Descriptive codes that required little interpretation were the first to be assigned (Miles & Huberman, 1994, p.57). Codes that are more inferential and explanatory tended to emerge later in the process of open coding. For example, the code HA above is descriptive, while a code such as HU (influence of husband) may be considered inferential. Occasionally a code looked slightly different operationally in different parts of the data. I resisted the urge to tie down a definition prematurely, but let both definitions sit and eventually the data and analysis resolved the question of what code definition was more appropriate. For example, the code CO, was applied to text that reflected a participant’s "concern for the opinions of others" and to text that reflected a participant’s "concern for what others think of her". I was unable at first to decide whether these labels represented the same idea or two related but different ideas. As more data were analyzed, these two definitions merged into one ("concern for what others think of her") that seemed to fit all examples of the code CO.

All the data from the study, that is, all transcripts of interviews (including those with family members and the audiologist), audiologic assessments, participant journals, and my own journal and notes, were coded as described above. A list of about fifty codes
was generated from the analysis. Extensive memos (see later section for more detail) on
the codes were kept, with quotes by different participants documented to link particular
concepts with the data. I created a profile of each participant that listed the particular
codes that emerged from the data for that participant. This profile illustrated how the
concept associated with a particular code manifested itself for a particular participant. I
moved into the process of axial coding as links between codes emerged. Throughout my
analysis I explored how a concept looked similar or different between and across
participants. This is the “constant comparison method” associated with grounded theory
analysis.

This first stage of in-depth analysis was largely conducted away from my
computer. Particularly as axial coding proceeded, I found it very helpful to draw diagrams,
especially flow charts, to show the relationships between and among concepts. Diagrams
are a form of visual memo (Strauss & Corbin, 1998, p. 217) that I used extensively
throughout all three phases of coding (open, axial, and selective). In this first stage of
analysis, I used diagrams to explore how the data addressed the research questions for
individual participants. I found the creation of flow charts particularly helpful to model a
participant’s evolving relationship with her hearing and the help-seeking process.

By the fall of 1998, I had accumulated copious notes and diagrams, mostly on
paper, to accompany my colourfully coded transcripts. However, I was unsure how to
proceed to develop theory from the many codes and linkages I had amassed. At this point,
I took a break from data analysis and turned my attention to writing a first draft of my
literature review.

In the spring of 1999, I began what I call the second stage of my data analysis,
which was facilitated by my introduction to a very methodical, step by step approach to
grounded theory data analysis outlined by Grams (1994). I started anew with my data,
using a more microscopic lens than in my first phase of analysis. This involved, first, a
word-by-word analysis of the first five or so pages of the first interview of this study. Each
idea represented in a line of text was given a code name to describe “what this is about”.
Figure 3.2 illustrates this process of open coding, using a segment from the first interview
Figure 3.2

Example of Open Coding

(Phrases in superscript font represent conceptual codes)

C: /we includes human comments don’t socialize all that much anyway downplaying hearing challenges; lifestyle: reduced socializing but uh... um (2 sec) I notice personal experience... you know even some ladies I talk to in the... in the laundry room or something else some of them are... have very quiet voices external attributions I have to ask them to repeat coping strategy... and I just downplaying hearing challenges tell them I don’t think I’m hearing that well {laughs} anymore coping strategy (u-huh) and they... you know they’re very understanding response of friends/cohorts cause they’re all my... my age cohort effect: comparison with cohort members

I: {laughing} they probably have the hearing (that’s right) the same

C: Exactly cohort effect one problem or another cohort members have similar problems anyway this is an over fifty-five building cohort effect: surrounded by cohort members; lifestyle

I: U-huh {C laughs}... u-huh... u-huh

C: So they’re very understanding response of friends/cohorts: cohort members relate to hearing problem

I: U-huh... ah... um... getting back... so that’s that’s the main... that’s your main... um... strategy then I guess is just (yeah) to tell people... that... (yeah) coping strategy there’s no other... d’y when you miss something do you ever ask people to... (repeat it?) coping strategy... rephrase something or (repeat it?) coping strategy repeat it (yeah) or... yeah

C: I just downplaying hearing challenge... say pardon coping strategy and... (u-huh)... or I didn’t hear you coping strategy or something like that it’s a (u-huh) and (1 sec) people are pretty good you know response of friends/cohorts {C small laugh}

I: And that always does the trick

C: Oh yes coping strategy: works in her view

I: Yeah... good

C: Yeah (u-huh) I mean these are friends friends vs strangers so you’re not going to... (u-huh)... friends and family they’re not going to be irritated by that response of family/friends/cohorts
with participant Cheryl (1-1-18). In this example, the conceptual codes follow (in superscript font) the idea they represent. The analysis of these first pages resulted in a list of 46 codes or concepts, which did not at this point break down easily into categories, properties or dimensions. I continued my line-by-line analysis for the entire first interview. As suggested by Grams (1994, p.13), I did not belabour the code names adopted at this point; the primary goal was to capture the meaning of the word, phrase or sentence as it was used by the participant.

Open coding of the section of transcript in Figure 3.2 resulted in the following list of codes: includes hu in comments, downplaying hearing challenges, lifestyle: reduced socializing, personal experience, external attributions, coping strategy, response of friends/cohort members, cohort effect: comparison with cohort members, cohort members have similar problems, cohort effect: surrounded by cohort members; lifestyle, response of friends/cohort members: cohort members relate to hearing problem, response of friends/cohort members, coping strategy: works in her view, friends vs strangers, response of family/friends/cohort. It may be seen that most of the codes from this piece of text address two main ideas or concepts: “cohort members” and “coping strategies”. These codes were all included in a preliminary framework that was developed from all the codes labeled in this first interview. The process of axial coding began to group some codes with others. The framework reflected this grouping of codes into categories, properties and dimensions. In some cases, codes seemed to fit equally well in two or more categories; in those cases, they were included in both categories and marked with an asterisk to indicate that they were present in more than one part of the framework. The framework at this point consisted of nine pages.

One small portion of this framework is shown in Table 3.2 to illustrate the process of axial coding and how codes relating to the idea of “cohort members” (as shown in Figure 3.2; italicized in Table 3.2) were incorporated into the beginning framework. The concepts related to “cohort members” are retained, even though some of these code names evolved to other names as more of the transcripts were analyzed. In Table 3.2, the terms categories, properties, and dimensions are put in parenthesis to indicate that, at this point.

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8 See Appendix L for the transcription key.
early stage, this is how the concepts listed were classified; the final grouping of categories, properties and dimensions in the theoretical framework was very different. In the final theoretical framework, for example, the concept labeled “cohort effect” was ultimately renamed “cohort members/friends” and was no longer a category but a dimension of a property labeled “influences”, which in turn was related to a category labeled “self-assessing”. Other concepts that were classified as dimensions in the early stages of analysis ultimately became sub-dimensions. Not shown in Table 3.2 are the page numbers that were attached to code names to indicate where in the data an example of a particular code could be found.

Table 3.2
Preliminary Theoretical Framework
Illustrating Axial Coding.

Italics highlight codes from Fig. 3.2 that relate to the idea ‘cohort members’

<table>
<thead>
<tr>
<th>“Categories”</th>
<th>“Properties”</th>
<th>“Dimensions”</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT EFFECT/INFLUENCE OF COHORT MEMBERS</td>
<td>comparison to cohort members</td>
<td>not hearing as well as hu</td>
</tr>
<tr>
<td></td>
<td>response of cohort members</td>
<td>not “giving in” to h aids</td>
</tr>
<tr>
<td></td>
<td>empathy by/with cohort members</td>
<td>accepted P’s hearing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>not surprised by P’s hearing</td>
</tr>
<tr>
<td></td>
<td>concern for what they think of her</td>
<td>if TV too loud</td>
</tr>
<tr>
<td></td>
<td>surrounded by cohort members</td>
<td>if she spoke too loudly</td>
</tr>
<tr>
<td></td>
<td>hearing aids</td>
<td>lives in “over 55” bldg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cohorts may have an aid positive aspects</td>
</tr>
</tbody>
</table>
As more data were coded, ideas repeated themselves and new ideas surfaced less frequently. At this point it was possible to move from a line-by-line analysis to sentence-by-sentence or even paragraph-by-paragraph analysis, with the analysis becoming a search for new ideas. Nevertheless, the analysis remained methodical until every interview, audiologic assessment, and journal was analyzed. Codes were grouped together as open and axial coding interacted in the ongoing analysis. By the end of this second stage of analysis, the list of all of the concepts identified in the data was a hefty seventeen pages long. As I worked with this list, I realized that many of the ideas represented were variations of the same idea. For example, the following entries were among those listed under the category “approaches to coping”, “trying to decipher key word”, “asking for the ‘last of that’”, “watching faces closely”, and “daughter says P uses visual cues a lot”. In asking the question “What is this about?” I realized that these ideas were all part of a bigger idea that I labeled “piecing together”. “Piecing together” became a dimension of the property “reacting to hearing challenges” and the ideas listed above became sub-dimensions.

Later in the data analysis I reviewed the codes I had identified in the first stage of data analysis and was heartened to discover that there was great similarity and overlap in the codes generated in both phases of analysis. This corroboration of findings increased my confidence that my findings are well-grounded and defensible.

Themes

In the process of coding data, making links between concepts, articulating the findings, and building theory, it became evident that some concepts were repeated, with slight variation, and these concepts seemed to fit equally well into more than one category or property in the emerging framework. Such concepts are called themes (Morse & Field, 1995), as they tend to appear, with variations, in different parts of the theory. Themes tend to be abstract and thus usually emerge later in the data analysis process. I kept track of concepts that were thematic through memos (“relationship memos”), highlighting the thematic label in upper case letters in the memo for easy retrieval so that I could easily track how a certain theme was manifested in different properties or dimensions.
Figure 3.3 contains two excerpts drawn from my memo writing. These two memos illustrate how the theme of "control" looks different in two examples of analysis, the dimension "effect of aging" in the first example, and the dimension "relationship with husband" in the second example (with dimensions italicized in examples).

<table>
<thead>
<tr>
<th>Figure 3.3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two Examples from Memos on the Theme “Control”</strong></td>
</tr>
</tbody>
</table>

**June 15/99**  
Thinking again about CONTROL, this time in relation to *effect of aging*. It seems to me that there is a perceived (conscious or not) relationship between aging and loss of control, and to the extent that one maintains control in one's life, then one is not aging, or is not displaying the effects of aging, loss of control being one of these effects. So, maybe because hearing loss and hearing aids are equated with getting older, then de facto, they are equated with a loss of control in one's life.

**July 28/99**  
P7's major trigger for booking the hearing test with the audiologist is her husband's hearing and their relationship (*relationship with husband*), and I wonder if she put off booking the test until she convinced him to also get his hearing tested and he agreed to go with her. Here the issue of CONTROL arises again.

**Writing Memos**

Throughout the data collection and analysis processes I wrote memos, both in longhand directly on interview transcripts and in a designated notebook, and, later in the analysis, on computer. Memos were of three categories: method memos, profile memos and relationship memos. Method memos documented the procedures followed and decisions made in analyzing the data, and the questions and dilemmas encountered in analysis. Profile memos discussed the data or interpretations thereof for a particular study participant. Relationship memos were the most numerous, especially later in the analysis, and were an important vehicle in the process of theory-building. They included insights on interpreting findings, making connections or links among concepts, and notes about
themes. An example of a method memo, a profile memo, and a relationship memo are illustrated in Figures 3.4, 3.5, and 3.6, respectively. Memos served three major purposes. First, they were an analytical device to record insights about the data and to help depict relationships among concepts. Second, memos provided a record of the analytical process; a way to document the stages of theory development. Third, later in the analysis, memos served as a springboard for writing about the findings and testing the theory.

Figure 3.4
Example of Method Memo

May 20/99
In analyzing the second five pages of P1-1, I find that I sometimes have more than one code I want to attach to words or phrases. What I do in these situations is attach both codes and try not to get too hung up on how and what I name them at this point.

Figure 3.5
Example of Profile Memo

June 26/99
It occurs to me that for P2, it was really the system that failed her (see 2-4-8) by both first audiology test in 1990 saying that a hearing aid would not help and then her doctor delaying a referral for a hearing test on more than one visit, and all the time P thinking she needed a hearing aid.

Figure 3.6
Example of Relationship Memo

June 24/99
What comes first: hl incorporated as part of one’s identity and then it’s easier to accept a ha (a facilitating factor in ha trial) OR the ha as instrumental in incorporating hl in one’s identity, or is it a bit of both?
Presenting Findings

The findings of this study are presented in the form of a written explication of the grounded theory associated with a theoretical (conceptual) framework. The writing process in grounded theory research is evolutionary: it is through writing about the findings that the theory that has been developed is refined. Expressing one’s ideas in writing forces one to be very clear in defining and explaining concepts and their linkages, and provides insights into any breaks in logic or points of weakness in the developing theory. As Miles and Huberman (1994, p. 299) point out, reporting the findings of a qualitative study is not separate from the analysis, it is analysis. As mentioned above, memos were a great facilitator in writing about findings, particularly at the beginning of the writing process. As well, three oral presentations I made at conferences on portions of the findings “forced” me to write about and articulate these findings, thereby helping me to clarify aspects of the developing framework and theory.

A very systematic approach to presenting findings was adopted, working through the different levels of abstraction in the framework (Grams, 1994). After introducing the framework and the core category, each category formed the basis for the substantive writing. Each category was defined, its properties were named, and a detailed explanation of every dimension associated with each property was provided. Every dimension was illustrated by a quotation that best exemplified the dimension under discussion and served to connect the theory with the data and ground it to the words of participants. Linkages between and among dimensions, properties and categories were explicated. This process was repeated for each category within the framework. Themes were defined, explained and illustrated toward the end of the writing process.

Morse (1994, p.231) states that one approach to qualitative writing is “to write... as though the reader is solving the puzzle with the researcher.” The methodical approach to presenting the findings just described should provide the reader with a clear logical path to follow. The reader should understand what each of the categories, properties and dimensions in the framework mean, and how different parts of the framework fit together.
This concludes the discussion of the analytic method. The study design, data collection and analysis processes adhered to strict and consistent ethical standards which are described in the next section.

**Ethical Considerations**

**Issues of Confidentiality and Informed Consent**

Ethical issues of informed consent, privacy, and confidentiality of data were adhered to as written in the consent form that was signed (before any data was collected) by all participating women (Appendix M), each family member who was interviewed (Appendix N) and the audiologist (Appendix O). Because the booking secretary mentioned my name to potential participants before my initial telephone contact with them, and because this initial contact occurred right after their audiology appointment was booked, it was important to make clear to these women that I was not affiliated with the audiology facility and that my study and their involvement in it was not part of their upcoming audiology appointment. As stated previously, each participant was assigned a code name for use in this dissertation as well as in all other publications and presentations related to this research. Only the researcher can connect a participant's pseudonym with her real name. All personal identifiers have been removed from any quotes used in presentations or publications. Care has also been taken not to reveal the identity of any family members of participants, the audiologist, or the name of the audiology business. Family members and the audiologist are referred to by a single initial in all quotes published or presented. As the consent forms indicate, informants were advised that they had the right to withdraw from the study at any time, that they had the right to request that I withdraw from observing their audiologic assessment, and that their participation, or lack thereof, would in no way affect the care they received regarding their hearing from the participating audiologist or any other hearing professional.
The Role of Researcher versus Clinician

I made no effort to hide from participants the fact that I am an audiologist. I made every effort, however, to avoid crossing into the role of clinician when participants occasionally asked me questions related to my audiology expertise, for example, questions about what to expect from the test or what certain results meant. At the last interview I did explain and discuss the basic audiologic findings to a few participants who had expressed in the interviews their sense of confusion regarding their test results. I made the decision to briefly step into my “audiology identity” after weighing the pros and cons of this action and concluding that the repercussions for my research were very minimal, given it was the end of participants’ involvement with the study. Furthermore, I felt that such action would not negatively impact these women or their course of audiologic rehabilitation. I felt uncomfortable at the prospect of parting company with a participant who might continue to seriously misinterpret her test results.

Criteria for Assessing Quality

Scientific rigour in quantitative research is tied to criteria of reliability, validity, and generalizability. These criteria have been referred to tongue-in-cheek as the “holy trinity...for all true believers in science” (Kvale, 1995). Qualitative research cannot be assessed using these same criteria because of fundamental differences in philosophy that affect every aspect of a qualitative study beginning with the choice of research question and ending with the analysis of findings. In fact, many respected qualitative researchers eschew the term “rigour” in favour of the term “trustworthiness” as the umbrella encompassing the criteria for assessing quality (Lincoln, 1995). I do not advocate the continuation of a rigid dualistic approach to empirical and post-empirical research, but I do wish to reiterate three of the major differences between quantitative and qualitative research to highlight the need for different criteria to assess each approach. First, qualitative research is naturalistic inquiry. Whereas a quantitative study controls variables as much as possible, a qualitative study is interested in how a study question plays out in the real-world or natural setting. Second, the nature of the data in qualitative research are
largely the words of informants, unlike the results of quantitative inquiry that reduce to statistics and graphs. A third difference is related to the first two. Quantitative research reifies objectivity, whereas qualitative inquiry acknowledges the influence the researcher and participants exert upon each other. Neither research paradigm disputes the need to adhere to the canons of "good science", but the debate continues, both within and across qualitative paradigms, as to the exact criteria that should be used to judge the merits of qualitative research. In the opinion of some researchers (e.g., Lincoln, 1995), these criteria are still emerging, as qualitative enquiry establishes its legitimate place in research. The following discussion describes the criteria of auditability, credibility, and fittingness as applied to this study, and the ways in which the study design, data collection, and data analysis contributed to the rigour or trustworthiness of this research.

Auditability

Reliability in quantitative research refers to the consistency, stability, and dependability of a test. In contrast, qualitative research does not seek to replicate results because it holds that findings cannot be repeated. As Strauss and Corbin (1998) point out, reproducing social phenomena, the area of interest to qualitative researchers, can be difficult because it is almost impossible to replicate the exact conditions under which data were collected and to control all the variables that may influence the findings. However, given similar conditions, the same general rules of data collection and analysis, and the same theoretical perspective of the original researcher, other researchers should arrive at the same or very similar explanations of the phenomena under study. Guba and Lincoln (1981) propose that auditability, not reliability, be the criterion of rigour or trustworthiness relating to the consistency of qualitative findings. Sandelowski (1986) identifies two important aspects of auditability:

A study and its findings are auditable when another researcher can clearly follow the 'decision trail' used by the investigator. In addition, another researcher could arrive at the same or comparable but not contradictory conclusions given the researcher's data, perspective, and situation. (p.33)
In this study, auditability was sought by attention to consistency in data collection, data analysis and interpretation of findings. Following the collection of data from the first two participants, the study design was reviewed and approved for its perceived ability to be feasibly implemented across all subsequent study participants. Data were collected in a consistent fashion for each participant, with attention paid to following the interview guide, thereby ordering the areas of inquiry similarly across participants. My prolonged contact with each participant over many interviews spanning many weeks provided the time necessary to conduct a thorough exploration of the research questions. Moreover, having several interviews with each participant allowed for topics to resurface in different interviews, sometimes frequently. I constantly compared a participant’s responses across interviews to gauge how consistent they were over time for the same question or for similar or related questions. Prolonged contact with participants also permitted me to verify my interpretation of her response from a previous interview or to probe further any answers that I perceived to be incomplete or inconsistent. Pursuing inconsistent responses was important in determining whether the source of variation reflected a change in the participant’s opinion on a question over the time course of the study.

Data triangulation, the use of a variety of data sources to crosscheck findings (Patton, 1990), was an important tool utilized in this study in the quest for auditability. For example, I compared a participant’s answers in interviews with the written entries she made in her journal and my observations of her behavior. Data from the audiologic assessment also permitted me to compare a participant’s comments to me or in her journal with her responses to the audiologist’s questions, either on the “client intake history form” or in conversation with the clinician before or after the hearing test. The over-riding goal was not to prove or disprove the consistency of individual participants, but rather to look at patterns of interaction in responses and behavior and to be able to understand incongruencies if and where they occurred.

Another form of data triangulation consisted of the various “permutations” of the interview format. Each permutation of conversational dyad: researcher and participant, researcher with family member (occasionally with participant present), participant and audiologist, and researcher with audiologist, provided a unique perspective on the
research questions. As well, as mentioned previously, my interviews with the seven women afforded the opportunity to play the role of participant-observer as well as interviewer, insofar as I was able to observe and record how each woman's hearing impacted her ability to converse one-on-one. I was also able to observe and record conversational "breakdowns" and some of the strategies these women utilized to cope with their hearing challenges and to repair conversational breakdowns. Similarly, my interviews with a spouse who was hard-of-hearing afforded the opportunity to observe aspects of his behaviour that could potentially affect the dynamics between him and his wife, the participant.

In data analysis, attention to detail in transcribing the raw data of interviews led to consistency in this first step of data reduction, as I strove to reproduce as faithfully as possible the utterances of each participant. A lengthy time spent immersed in data analysis and interpretation spanned two slightly different approaches to coding that were compared and found to corroborate each other in the identification of concepts leading to the development of theory. The data analysis procedures described in this chapter and the presentation of findings in upcoming chapters should provide the reader with a "decision trail" that can be easily followed thereby providing an understanding of the step-by-step process leading to the development of the particular interpretation and theory.

Credibility and Fittingness

The construct of validity assumes many forms in quantitative research, all of which reduce to a concern about the "truth" value of a measurement. Truth is at best an elusive goal, especially in our post-modern world, and teleological arguments abound as to whether or not it can even be measured. Credibility and fittingness are two related criteria that are espoused to gauge the validity of qualitative research, replacing the quantitative constructs of internal validity (also dubbed authenticity) and external validity (otherwise termed transferability or generalizability) respectively (Guba & Lincoln, 1981; Sandelowski, 1986). As Sandelowski (1986) remarks:
A study is credible when it presents such faithful descriptions or interpretations of a human experience that the people having that experience would immediately recognize it from those descriptions or interpretations as their own. (p. 30)

and...

A study meets the criterion of fittingness when its findings can “fit” into contexts outside the study situation and when its audience views its findings as meaningful and applicable in terms of their own experiences. In addition, the findings of the study “fit” the data from which they are derived, reflecting both typical and atypical elements. (p. 32)

As described elsewhere, this study is one that is descriptive and explorative. It is inappropriate to generalize its findings to a wider population; ultimately, it is up to other researchers using other research methods to determine how well the findings and theory developed from the findings of this study “fit” with the findings obtained in other contexts. One measure of fittingness is met, however, in the demonstration (discussed in the final chapter) that findings of this study are consistent with the findings from related research documented in the literature.

A significant measure of a study’s credibility and fittingness is the degree to which the findings and their interpretation are connected to the data. Here I paid close and constant attention, making sure to trace every finding and the theory developed directly back to the data: either to quotations by participants, a family member or the assessing audiologist, journal entries, behavioural observations, or other data sources as described earlier in this chapter. Each of the findings and the conceptual relationships among them presented are supported by an example from the raw data.

A second major way I sought credibility in this research project was through validation from each participant herself of the data she provided and my interpretation of that data. This was done informally throughout the interview process, and formally in a designated discussion period that occurred in the last forty minutes or so of the final interview. As mentioned earlier in this chapter, in preparation for this “validation session”, I reviewed my analysis and interpretation of a participant’s responses related to the key research questions and I prepared a synopsis to review with each woman. This synopsis reflected my interpretation of her comments to me in four key topic areas: her hearing,
booking a hearing test, the results of her hearing test, and hearing aids. Participants confirmed most of my interpretations, but occasionally someone corrected my interpretation of a comment. This activity of member checking represents an important contribution to the validity of this study. It also increased my sense of confidence in the results and the way I was working with the data, and provided a sense of closure to the interview process.

Reflexivity: The Researcher as Instrument Tool

Qualitative inquiry explicitly acknowledges that there is a constant interplay between the researcher and the research act, with each mutually influencing and shaping the other (Strauss & Corbin, 1998). Issues of reliability and validity ride largely on the skills of the researcher in collecting, analyzing and interpreting data (Miles & Huberman, 1994). Thus, an important component of the research process and the evaluation of its quality involve analyzing the researcher as research instrument.

Miles and Huberman (1994, p. 38) list four markers of a good qualitative “researcher-as-instrument”. They are: 1) some familiarity with the phenomenon and the setting under study; 2) strong conceptual interests; 3) a multidisciplinary approach; and 4) good “investigative” skills, including doggedness, the ability to draw people out, and the ability to ward off premature closure. To this I would add a fifth dimension, the ability and willingness to reflect on one’s role in and influence upon the research. I feel that I bring skills in all of these areas to this research project, as a result of wide-ranging experience in clinical and rehabilitative audiology (an interdisciplinary field), combined with a strong academic background in basic, applied, and social sciences, languages and music.

Throughout this study, I evaluated and kept notes of my perceived role in the research process and the “baggage” of assumptions, biases, and cultural and professional influences that I brought to the research. Through this process I was better able to situate myself within this research project and recognize various influences on how I collected, analyzed and interpreted the data.
Summary

This chapter has provided a detailed explanation of the methodology used in the present study. The rationale behind a qualitative, and in particular a grounded theory, approach was outlined. Details of the study design were presented. The specific data collection and analysis procedures were defined and described. Issues of ethics and quality were discussed. This chapter sets the stage for the next chapter (Chapter 4), in which the research participants will be introduced, and for the subsequent five chapters (Chapters 5 to 9), in which the findings of this research will be presented.
CHAPTER 4

THE PARTICIPANTS

This chapter introduces the women who took part in the present study. Background information is provided on each woman, based on her comments and my observations over the course of our time together. These descriptions will provide context for the discussion of findings in the chapters to follow.

P1: “Cheryl”

Cheryl was 72 years old at the time of this study, married 48 years to D. who is eight years her senior. They are both originally “westerners”, but lived many of their working years in Ottawa. They now live in a condominium and have been in the same urban setting in B.C. since 1983. They have two sons, who live with their partners in another town in B.C. At our first meeting, Cheryl expressed excitement at the prospect of a first grandchild, due some six months later. Apart from her immediate family, the only relative Cheryl appears to be close to is an aged aunt, who has a significant hearing loss and wears a hearing aid. Cheryl spends one day a week with this aunt.

Cheryl’s approach to her hearing was distinguished by two features. First, she grappled with trying to decide whether her hearing is a “problem” or not. Second, in this quest she voiced more concern about the effect her hearing may have on family members and friends around her, rather than on the effect it may have on her personally. More than other women in this study, Cheryl seemed to rely on the opinions of others to define herself. Her comments generally expressed concern or interest in the opinions of others and an eagerness to please.

Cheryl’s husband, D., has worn hearing aids for some years. Although Cheryl denied that her husband’s experience with hearing aids was an influence in her own decision-making process of whether or not to try an aid, other comments she makes
suggest otherwise. Frequent mention is made of repair problems and the limitations associated with her husband’s hearing aids. However, she also commented that she feels that her hearing now is worse than her husband’s with his hearing aids.

Cheryl and her husband seem to share few activities, except for television and an annual cruising trip. She stated that her husband’s poorer health restricts his activity level. Cheryl pursues several activities on her own, including bridge, walking, and a new activity: a weekly art class. Cheryl frequently mentioned that she has difficulty hearing in this class; thus, it may be a strong contributing factor in Cheryl’s booking a hearing test at this time.

P2: “Phyllis”

At the time of this study, Phyllis was a 74 year-old widow living alone in her home of 46 years. When her husband died one year before Phyllis and I first met, they had been married for 52 years. Phyllis is the only participant to have had a prior hearing test by an audiologist, which occurred about seven years ago. Although she anticipated getting a hearing aid at that time, the audiologist told her that an aid would not help her yet. In 1996, a balance problem led to a visit to an ENT at which time another short hearing test was done by the ENT. This was a bad experience for Phyllis because she had a severe flu and dizziness at the time.

Phyllis’s main impetus to get tested now is the example of a middle-aged female acquaintance (a friend of Phyllis’s daughter) who is a successful hearing aid user and who sees the same audiologist that Phyllis arranged to see in this study. In fact, it was this acquaintance who recommended the audiologist, because she is very pleased with the service she receives from her.

Phyllis has two children and three grandchildren, who all live within a few miles of her. She often cares for the two younger grandsons, age six and nine. Having lived in the same city all her life, Phyllis keeps in touch with many old friends, and she lunches with the same group of women once a week. When her husband was alive, they square danced and entertained frequently. The family has a cottage at a nearby lake. Phyllis reports that her health is fairly good.
Phyllis distinguishes herself by her “matter of fact” approach to her perceived need for hearing help.

P3: “Janet”

Janet was 82 years old at the time of this study, living with her husband of 63 years on a large acreage in Ontario. They have spent winters on the West coast for about fourteen years. Janet was one of six children and has a large extended family. She and her husband have three daughters, and many grandchildren and great-grandchildren spread around the globe, but mostly across Ontario. Her life appears to revolve around her family. Janet has made many household moves to towns in Ontario and Quebec in her life, first as a result of her father’s work, and then as a result of her husband’s work as a civil engineer. When asked if she thought she adapted well to change, Janet responded that she does because she has “had to...living with W {her husband}”.

Janet never worked outside the home, but was involved in numerous volunteer activities before “retirement”. Her activities now include bridge, attending theatre, reading and entertaining (mostly family). She and her husband share very few activities in common. Her health is apparently good, except for glaucoma.

Janet has had no prior hearing test and admits to having very little problem hearing. She perceives her family to be more concerned about her hearing than she is. She booked a hearing test now at the prompting of her daughters and her sister, and arranged to have the test while she was on the West coast because it is more convenient than in Ontario where she would have to travel to the city from her country acreage. Her husband also voiced concern about her hearing, but wasn’t aware that any other family member had commented on it.

Her husband has had a long-standing hearing loss and wears a hearing aid. Janet expressed frustration that her husband did not use his hearing aid more and that he did not get a second one. When I telephoned Janet after her return to Ontario (a few months after this study ended), she said that she had followed the audiologist’s recommendation and looked into getting a hearing aid but stated that she was told her ear canal was too small
and narrow to accommodate one. The audiologist who tested her as part of this study had also commented on her extremely small ear canals.

P4: “Marjorie”

Marjorie was 77 years old at the time of this study, and widowed for twenty years. She was born in England and spent much of her childhood in India. She had a brief nursing career before she met her surgeon husband and moved to the West coast of Canada to start raising a family. She has four children: her two daughters and two grandchildren live in the same city and see her quite often. Her two sons live in a town within a few hours’ drive, and Marjorie drives there occasionally to visit them. Marjorie has siblings and other older relatives in England, and visits them every few years.

Marjorie appears to have a very stable and predictable lifestyle, with no major health conditions, except glaucoma. She has lived alone in the same condominium for the past twelve years. She drives her own car and appears to be very independent. She has been an avid bridge player for many years; it is now her main social activity. She does not perceive herself to have any hearing difficulty. She has had no prior hearing test and only booked this one at the insistence of her daughter, whose major complaint about Marjorie’s hearing (according to Marjorie) is that she cannot hear her granddaughter when she speaks to her from the back of the car.

Marjorie was pleased with the audiology test results, which did not indicate any immediate need for a hearing aid.

P5: “Frances”

Frances is distinguished by a suspicious nature and a strong need/desire to be in control of her surroundings. In interviews she exhibited a pronounced distrust of others’ motives. She was reticent to reveal much about her background. This was evident in the audiology appointment as well, where she was reluctant to disclose her age (76 years). As a result of her attitude, I did not get a chance to explore many details about her past. Although it appears that she has been married at least twice, she never revealed whether
she is currently widowed or divorced. She apparently lives alone in the house she has owned since moving to the West coast over ten years ago. She states that she has frequent visitors, especially a granddaughter. Originally from the Maritimes, she stated that she managed her own retail women's clothing store in Ontario for many years before moving west. She has been involved for many years with an arts and crafts guild and many volunteer activities at the seniors' centre. She was evasive about a son who lives in the same city. Despite several requests on my part, Frances never agreed to have another family member talk with me for this study. She was the only participant to refuse access to a family member.

Frances had had no prior hearing test. She was self-motivated to have her hearing checked because she had noted some hearing difficulty and symptoms of intermittent tinnitus and persistent feeling of blockage in one ear.

P6: “Louise”

Louise was 77 years old at the time of this study and had been widowed for about one year. She was born and lived in Saskatchewan most of her life until she and her husband moved to the West coast thirteen years previously. She is the youngest and last living of eight children. She married at age twenty and worked for many years in grain farming until her husband was forced to give it up for health reasons. She did office work for a time after that. She has two children, two grandchildren and one great grandchild. She is in apparent good health and seems to have an active social life, mostly with other husband-wife couples. She spent the last four years of her husband's life caring for him, three of those years at home. Hence, she has undergone a significant lifestyle change in the last year. She made frequent references to her husband in our interviews and stated that she is still adjusting to life without him. Her activities include walking, reading, baking, handcrafts, church, and lawn bowling. She recently stopped volunteering at the residential care facility where her husband spent his last year.
Louise has noticed her hearing drop for the last few years but put off having her hearing tested, in large part because her doctor, whose opinion she values highly, had a “wait and see” attitude about her hearing.

P7: “Betty”

This 76 year old woman lives with her husband of 48 years in their house on the West coast, where they have lived since 1951. They have four adopted children and several grandchildren, all of whom live within a few hours’ drive. Betty’s activities have been curtailed by several recent health problems that include asthma, hip surgery, a bladder operation, and voice problems. She and her husband enjoy socializing with a few close friends, and it is in these interactions that Betty notices her greatest difficulty hearing. Her husband often acts as interpreter in these situations. She and her husband also have significant difficulty hearing each other at home.

Betty is distinguished by a sincere concern about her hearing, especially as it affects her relationship with her husband. She had a quick hearing test about three years ago at her ENT’s office where she has been followed for symptoms of vocal weakness. When booking the appointment with the audiologist now, Betty convinced her husband to have his hearing tested at the same time as her, even though he admitted no difficulty hearing. However, his test results revealed a severe unilateral loss and he was referred for further testing (I discovered in follow up with the audiologist after this study was completed that an acoustic neuroma was confirmed).

Betty’s hearing test results suggested that a hearing aid may help her. In our last interview, however, Betty stated that she and her husband would delay decisions about hearing aids until more was known about his hearing loss and after they returned from a summer trip to Scotland.

With this introduction to the women who took part in this study, let us now proceed to discuss the findings relating to them. The next chapter begins this discussion by providing an overview of the theoretical framework that is the backbone of the findings of the present study.
CHAPTER 5

OUTLINE OF THE THEORETICAL FRAMEWORK

Chapters five to nine present the findings of this investigation. These chapters have four purposes: 1) to present the theoretical framework that is the backbone of the findings of this study, 2) to define and describe the categories, properties and dimensions contained in this framework, and the themes that weave through the data, 3) to explain the linkages among categories, properties, dimensions, and themes that emerged during data analysis, and 4) to illustrate each concept and linkage with raw data. This chapter begins the discussion of the findings by providing an overview of the theoretical framework.

The Core Category

The core category that emerged in this study is the spiral of decision-making in self-assessing hearing. Two major categories are connected with this core category: 1) self-assessing, and 2) help-seeking.

Self-assessing refers to the process whereby participants evaluate and analyze their hearing and hearing challenges\(^1\) and the consequences of these challenges. The self-assessing process also includes making decisions, both conscious and sub-conscious, about how to deal with these challenges and consequences. Some questions that drive the self-assessing process are: Is my hearing a problem? If so, how much of a problem is it? Is my hearing affecting my life enough to seek help? If so, what should be done? The answers to such questions help participants to make decisions regarding their hearing.

At particular points in the self-assessing process, participants take help-seeking steps. Help-seeking refers to the behaviours that participants engage in to find out more about their hearing and to explore possible solutions to their hearing challenges. Help-

\(^1\) The terms "hearing challenges", "hearing problems" and "hearing difficulties" are used interchangeably throughout this and subsequent chapters.
seeking may take many forms. Requesting that a portion of conversation be repeated is a basic form of help-seeking. For some individuals, help-seeking may include confiding in or disclosing to a friend about their hearing problems. Talking to one’s family doctor about hearing is a form of help seeking. The help-seeking of focus in this study is the help that is sought from a health professional with perceived expertise in hearing. This may be a family physician, an ENT, or an audiologist. The help-seeking step of interest is the first appointment with an audiologist for a hearing assessment (also referred to as “audiologic assessment” or “hearing test”).

Help-seeking yields an outcome or outcomes. **Outcomes** may provide a participant with new information about her hearing. Each participant adds this new information to her existing pool of data. Help-seeking and the ensuing outcome(s) may lead to another round of self-assessing to determine a participant’s next step or next stage in help seeking for hearing problems. This iterative process may be repeated many times. It is termed a ‘spiral’ rather than a cycle to emphasize the dynamic nature of the self-assessing process: one does not return to the same point in self-assessing after one has evaluated the outcome(s) of help-seeking. Figure 5.1 shows the iterative process that relates self-assessing, help-seeking, and outcomes. The arrows indicate the path from self-assessing to help-seeking, to outcome(s), and back again to self-assessing.

**Figure 5.1**

*Iterative Process Relating Self-assessing, Help-seeking, and Outcomes*
The Theoretical Framework

Table 5.1 illustrates the concepts associated with the theoretical framework that emerged during the data analysis. The core category or backbone is the "spiral of decision-making in self-assessing hearing". The framework shows the two categories connected with this core category: 1) self-assessing, and 2) help-seeking. The first category, self-assessing, is described and explained by four properties: a) reacting to hearing challenges, b) reacting to consequences, c) longer-term consequences, and d) influences. The second category, help-seeking, is composed of four properties: a) disclosing, b) booking a hearing test, c) considering a hearing aid, and d) the hearing test.

The next chapter, Chapter 6, considers the properties and dimensions associated with the category "self-assessing". The following chapter, Chapter 7, considers the first three properties of the category "help-seeking". The fourth property of help-seeking, the hearing test, is considered in Chapter 8. The final chapter of findings, Chapter 9, presents the themes and integrates the findings.
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CHAPTER 6

SELF-ASSESSING

 CATEGORY  PROPERTIES  DIMENSIONS

Self-assessing

Reacting to hearing challenges
Piecing together
Relying on others
Persevering
Avoiding
Abandoning

Reacting to consequences
Reflecting
Feeling stress
Self-contradicting
Minimizing

Longer term consequences
Effects on relationships
Reduced quantity of interaction
Reduced quality of interaction

Security issues

Influences

Relationships
Spouse
Other family
Friends and cohort members

Aging

Lifestyle

External factors

Chronology of hearing challenges
Retrospective
Prospective worries
The purpose of this chapter is to describe the concepts associated with self-assessing one’s hearing in the context of seeking help for hearing challenges. Self-assessing may also be called “evaluating” or “analyzing” one’s hearing and refers to identifying situations in one’s life that are challenging in terms of hearing, reacting to those challenges, and gauging the effects of these challenges and one’s responses to them on one’s life. Self-assessing comprises four properties: a) reacting to hearing challenges, b) reacting to consequences, c) longer-term consequences, and d) influences. Before discussing each of these properties and their dimensions in turn, it is helpful to examine how they may interact in the self-assessing process.

The following example will illustrate how the properties associated with the process of self-assessing that emerged from this study are proposed to interact. A situation presents itself that is a hearing challenge for a participant. Let’s use the situation of a woman having difficulty hearing a three-way conversation with her husband and an acquaintance at a social gathering. This challenge leads to direct consequences (which may also be termed effects). In this example one direct consequence may be the woman’s inappropriate answer to a question asked by the acquaintance. Indirect consequences may also arise from direct consequences, in this case perhaps there is a feeling of embarrassment by the woman (and maybe even her spouse) for having responded inappropriately. How a consequence is manifested is mediated by how one reacts to the hearing challenge that created it, e.g., the strategies or tactics a person employs to deal with the hearing challenge. “Reacting to hearing challenges” is the first listed property of self-assessing in our theoretical framework. In this example, if the woman had chosen to ask for repetition of the part(s) of the conversation she missed, or had she requested that the threesome move to a quieter location to talk, she may have experienced more successful (direct and indirect) consequences (i.e., she might have given an appropriate response and not felt embarrassed). Instead, she chose to avoid taking action or did not feel there was a need for action.

Over days, weeks, months, and years, this woman may experience many hearing challenges; that is, scenarios similar to the one described above may play out repeatedly. The associated consequences may be perceived as desirable or undesirable. Over time,
longer-term or life consequences (the third listed property in self-assessing) may arise in addition to the immediate short-term consequences stemming from individual incidents. This woman will react to the short-term and longer-term consequences (the second listed property in self-assessing). Reactions to hearing challenges tend to be problem-focused; reactions to consequences tend to be more emotion-focused.

The self-assessing process is a complex interplay among hearing challenges, their consequences, and the individual’s reaction to those challenges and consequences. Overriding all of this are many influences in one’s life (the final property in self-assessing) that help to determine the kinds of hearing challenges one faces, the ensuing consequences, and one’s reaction to both the challenges and the consequences, short-term and longer-term.

These four properties of self-assessing and their interaction are schematized in Figure 6.1. The properties are represented by the oval shapes, and the dotted lines forming a box around these properties indicate that the experience of encountering a hearing challenge, reacting to it, and its short-term direct and indirect consequences is a sequence that may play repeatedly, as described in the example above.

Let us now look at the process of self-assessing in more detail, by examining in turn each identified property and its associated dimensions (as listed at the top of this chapter and in Table 5.1).

**Reacting to Hearing Challenges**

“Reacting to hearing challenges” is the first listed property of self-assessing. It refers to the predominantly problem-focused strategies participants utilize to respond to situations that present hearing difficulties, with conversational interactions being of particular interest. The participants in the present study made use of various strategies to deal with these hearing difficulties. The following describes dimensions of “reacting to hearing challenges” that emerged in this study: piecing together, relying on others, persevering, avoiding, and abandoning.
FIGURE 6.1
Interaction of Properties of Self-assessing

Ovals represent properties of self-assessing
Dotted rectangle indicates that challenges
and resulting consequences occur repeatedly
"Piecing together" refers to participants' attempts to put the puzzle of conversation together when pieces or chunks are missing. A number of strategies may be utilized to piece together conversation. It may involve collaborating with another hard-of-hearing friend or peer. As participant Phyllis stated in her first interview: “my friend and I she’s having problems too {laughs} and we try to get together afterwards to see what the other one heard that the other one missed y’know {laughs}” (2-1-6).

The above example illustrates that the task of ‘piecing together’ conversation may be a social opportunity, whereby two friends get together after a conversation to fill each in the pieces that the other may have missed, thereby working toward the mutual goal of understanding a conversation, albeit at a delay.

Sometimes understanding a conversation hinges on picking up one important word or phrase. For example, Phyllis stated that she often misses a “key word” with the result being that she spends much time in the conversation trying to decipher it: “all you have to do is miss a key word and and when you miss that word like I can hear the whole sentence except for that one word and my brain’s going trying to figure what that word is..but uh it doesn’t always come through so you miss it” (2-1-7).

Specific requests can help when a person is piecing together conversation. Betty, for example, stated that she sometimes asks a conversational partner for the “last of that” (7-1-8) as a specific request to fill in the missing pieces that often occur at the end of utterances when people’s voices drop in volume. Another example from a journal entry by Betty indicates how attention to visual cues may help her to piece together missed conversation: “she is elderly and speaks quite softly so I watched her carefully while she was talking and once asked her to repeat” (7-j-Mar6).

These examples show that individuals are motivated to utilize a number of strategies to piece together missing conversation. These may include verbal requests of

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1 In reading quotations from participants, the reader is reminded to refer to Appendix I. for the transcription key.
partners, attention to visual cues, and collaboration with others to attempt to achieve as full an understanding of the conversation as possible.

Relying on Others

"Relying on others" refers to participants’ tendency to depend on a friend or family member, especially a spouse, to interpret missed conversation for them. Phyllis, widowed about a year before this study, related how her husband would hear things that she missed when they were out together: "Afterwards if I hadn't got what he’d..had been said he would tell me you know" (2-2-2). Betty talked of how she relies on her husband: "Rather than ask them to repeat I just figure well I'll let it pass I I'm not sure what they said but then when we come home G {her spouse} will tell me if I if I'm curious about what I didn’t hear then he’ll tell me” (7-1-3).

Spouses tend to play the role of interpreter most often, although participants also relied on sons, daughters, and in-laws for missed information. The above comments show that it may be some time after a conversation is finished, often several hours later or even the next day, before a family member provides the participant with missed conversational details. Nonetheless, participants sometimes await such information to fill in what they missed in conversation, rather than asking for help directly from the conversational partner.

"Relying on others" may also refer to how participants may depend on a spouse or other significant other to respond in conversation and to guide her own response when she feels unsure about what was said. Betty, for example, wrote of her difficulty hearing a friend who sat in the back seat of their car: “so I let G respond to her and I just listened to what he said” (7-j-Mar29).

The next dimension, persevering, addresses a strategy to obtain more immediate feedback on missed portions of conversation.
Persevering

"Persevering" refers to participants' pursuit of what they missed in a conversational interaction. Asking for repetition of an utterance emerged as the most common form of persevering. Marjorie's comment was typical of participants: "I have no hesitation in asking them to repeat what they said" (4-4-7). Phyllis, explaining why she doesn't feel isolated by her hearing loss, stated: "I guess that's because I persevere (u-huh)...{laughing} make people face me" (2-2-17).

There are certain situations in which participants feel more comfortable persevering. They stated that they persevere when they are speaking with one or two other people, but they are not as likely to ask for repetition when they are in a group, as indicated by Betty, in talking about when she would use a hearing aid:

B: it's more when I go out and I don't know the people or I uh I'm in a group of people and I don't hear them and I don't like to ask them to repeat and if they were talking directly to me I would tell them I hadn't heard but if they're talking generally in the crowd well I don't disturb them to say what was that you said (7-4-3)

Like Betty, Louise finds it easier to persevere among friends than with strangers:

I: Do you find it easier in some situations to ask for someone to repeat... than others?
L: Well uh with your friends it is (hm) uh strangers... it's a different cup of tea (6-1-13)

These examples suggest that hard-of-hearing individuals with an attitude of perseverance improve their understanding in conversation, through tactics such as asking for repetition of utterances, and by alternative means such as reminding partners to face them to maximize the availability of visual speech cues. These proactive strategies may help avoid or mitigate negative feelings such as isolation that might otherwise result from hearing loss. Persevering has its own comfort zone, however, beyond which participants may avoid this tactic, such as when in a group or among strangers.
Two other strategies in conversation that emerged from the data have the effect of moving participants away from greater understanding of conversation. These are labeled “avoiding” and “abandoning.”

Avoiding

“Avoiding” refers to participants’ tendency to avoid any action or behaviour in conversation that draws attention to themselves and to their difficulty hearing, such as asking for repetition of an utterance. As Betty stated, she “doesn’t like attention drawn to her” (7-1-9), thus she avoids asking for any help when she is struggling to understand, especially in group conversations. The quotation below reinforces how she relies on her husband in group situations.

I: Do you find that you depend on G’s {her husband} hearing?
B: I do when we’re out (when you’re out) u-huh if we’re out in a crowd or anything like if we go to a parks party or anything like that..I’m I’m embarrassed because someone’ll come up to us and speak to us and I don’t hear them so I’ll have to ask G afterwards what they ‘I don’t like to say I didn’t hear you when somebody comes up to..
I: So what do you do in that situation?
B: I just nod I guess I don’t know what I do but I don’t ask them to repeat (7-2-5)

Pretending to hear and understand is one aspect of avoiding and is a tactic that Betty and other participants utilize to give the impression of normal hearing. Phyllis highlights how avoiding and pretending can go hand in hand:

I: if you’re in the group and you’re having difficulty hearing do you take any action to>
P: <I try to act as though I hear what I’m..what’s being said but I realize I’m I miss an awful lot (u-huh) so I hate to try and..uh repeat a conversation because I’m honestly not sure what the conversation was (2-1-7)

Participants are concerned about how they are viewed in the eyes of their family, friends, and peers. They want to fit in:

B: we were out a lot {on holidays} and in groups of people and it’s very hard to get all the conversation..I just let it go on holidays.. pretended I was understanding..hope I looked right but (1 sec) it’s hard.. I think I’m going to have to get one {hearing aid} because I find that I’m not..taking part in any of the talking because I’m not sure what they’ve said and I don’t ..I want to uh not say something that doesn’t fit in with it so (7-5-1)
The daughter of participant Marjorie also pointed out an interesting cultural aspect, perhaps related to her mother’s British upbringing:

D: she’s {her mother} very very um (3 sec) extremely well-mannered person so uh uh maybe it feels a bit awkward..to her like you know it’s not polite to miss people’s conversations probably makes her feel a little insecure when it’s pointed out (4-d-6)

The desire to maintain control arises here: If participants feels that control over their role or status in conversations is better maintained by avoiding requests for repetition or by pretending to hear, then the strategy of avoiding will be adopted. This suggests that a hard-of-hearing person may undertake a cost-benefit analysis to decide the relative benefit of hearing what’s said versus the perceived costs of disclosing one’s hearing problem. These costs may include relinquishment of control, diminution of one’s status or self-image, and the threat to one’s sense of identity. The concepts of control and identity will surface again in later discussion.

**Abandoning**

“Abandoning” refers to giving up a strategy that might help the person to better understand a conversational interaction when results of that strategy are less successful than anticipated or hoped. It differs from “avoiding” in that it involves letting go of active attempts to understand that may have worked in the past or in other contexts, rather than the more passive stance of not trying at all (avoiding). Decisions about whether to abandon a strategy may occur in the immediate sense, i.e., at the time a particular hearing challenge presents itself, or a strategy may be abandoned more permanently, perhaps as a response to the longer term consequences of a particular hearing challenge that is experienced repeatedly. Betty, for example, states that she gives up asking her son and grandson to repeat when their repetitions are in the same quick pace or low volume that do not enable her to understand (an example of immediate abandoning):

I: Does he {the son} mention does he complain about your hearing?
B: No he doesn’t and I can’t hear him he mumbles {laugh} unless I’m sitting right by him and he talks so quickly anyway..and he’ll do this same
thing on the phone he'll kind of whisper something to me and I'll say S I can't hear you when you whisper but you know
I: It doesn't change?
B: No it doesn't change so I just I figure if I didn't get it G {her husband} might have and you know when we're talking here I'll say what did S say about such and such I'll ask him once or twice and then I let it go you know
I: Does G hear him?
B: G finds it difficult to hear him too the same as N {a grandson} neither of us can really hear N and you ask him once and he does it the same way again so there's no point in going on any further (7-2-5)

Betty's comment here that she will "let it go" after a few requests for repetition was echoed by several participants. One participant stated that at the beginning of an evening out she will ask for repetition, but will abandon requests soon after. Participants view requests for repetition as trying or monotonous for communication partners: "I sometimes ask them {friends} to repeat but that gets kind of monotonous for them so rather than ask them to repeat I just figure well I'll let it pass" (7-1-3). Some participants, like Phyllis, empathize with the effort involved in repeating:

P: I'm sure that they're pleased that I've stopped asking {after she asks family members a few times to repeat something}...because it is...it is hard to keep repeating things to people when they're deaf (u-huh) my grandmother lived with us for five years and was quite deaf and uh I had a hard time making her hear me and it is...it is very trying (u-huh) um..living with it (2-1-7)

Louise, below, provides an example of more permanent or longer-term abandoning:

L: there's no use of sayin' um.. I didn't hear you..because a lot don't understand I: A lot of people
L: A lot of people don't understand why you don't hear it (1 sec) most of my friends know I've told them I said you know I'm deaf you'll have to yell at me to uh get me to answer..and they laugh of course..at that and...they say well I don't think you're that deaf cause you can hear my voice..I say yes I have to listen to hear your voices so that's (1 sec) that's all I know I: U-huh u-huh..people are not aware how..hard you're working I guess L: No they don't (6-2-11)

The above examples illustrate three noteworthy points: 1) abandoning seems to stem from an inability to make a conversational partner understand or value the importance of repetition to the hard-of-hearing person; 2) it is also evident that repetition
alone often does not improve understanding; a different strategy like asking a partner to rephrase a comment, or to speak more slowly could achieve a better outcome and reduce the need for abandoning; thus hard-of-hearing persons also need to learn strategies in order to educate and change the behaviour of others, as well as learning to change their own behaviours; 3) hard-of-hearing persons may be more conscious of, and sensitive to, the effort involved in repeating comments, particularly if they’ve been in a similar situation with other friends or relatives. These points suggest that “abandoning” could be reduced with greater awareness and communication strategies training for both hard-of-hearing and normal-hearing persons.

In summary, the five dimensions of “reacting to hearing challenges” that emerged in this study represent inter-connected strategies that focus on problem-solving for specific hearing challenges, particularly in the realm of conversational interactions. The particular choice of strategy appears to depend largely on the conversational context. For example, ‘persevering’ occurs among friends or with one or two people, ‘avoiding’ occurs among strangers or in bigger groups. The description of a particular dimension (e.g., piecing together, relying on others) was remarkably similar among all participants who talked about it. The strategies that participants utilize in reacting to hearing challenges are an important component in the process of self-assessing their hearing, especially insofar as the choice of strategy may result in more or less satisfactory consequences.

**Reacting to Consequences**

“Reacting to consequences” is a second property of self-assessing. It refers to the response of participants to the short- and longer-term consequences of hearing challenges. These responses are primarily emotion-focused, in contrast to the more problem-focused dimensions of the property “reacting to hearing challenges”. The dimensions of “reacting to consequences” that surfaced in this study are: 1) reflecting, 2) feeling stress, 3) self-contradicting, and 4) minimizing.
Reflecting

"Reflecting" is one response to the consequences of hearing challenges, especially over the longer term. Betty states: "I think about it {hearing} every time I don't hear" (7-5-1). This comment reveals that an important precursor to reflecting is having an awareness of one's hearing difficulties. With presbycusis, this awareness may dawn slowly, as Phyllis states: "It's so gradual...the coming of it...that you don't really realize it you get used to living with it...and uh...you don't realize quite...that much that um...that you're not hearing" (2-2-19). If episodes of hearing difficulty are mild and/or infrequent, adjustment ("you get used to living with it") may override full awareness. Sometimes having a reference point by which to compare hearing over time helps, as Phyllis illustrates in talking about her difficulty now in hearing her telephone ring: "I realize that too you know I used to hear that {her telephone} I used to think that was a really loud ring" (2-2-10).

Janet wondered why family members seemed so concerned about her hearing when she said she had no trouble hearing: "I never noticed it {that she missed things family members said} but maybe they {family members} did and maybe they were talking to me and I didn't answer them" (3-5-5). This comment highlights how family members may be instrumental in facilitating a participant's awareness and reflection about hearing. The quotations above illustrate that reflecting involves being aware of one's hearing, devoting some thought to it as episodes of hearing difficulty unfold over time, and acknowledging, as a result of reflection, that hearing may pose certain challenges in one's life.

Feeling Stress

The second dimension of 'reacting to consequences' that emerged was labeled "feeling stress". This refers to the demands made on a participant's physical or mental energy or emotions as a result of the challenges of hearing. A few examples of the words participants used to describe their feelings of stress when they don't hear were "frustrated" (2-1-5), "bothered" (3-1-10), and "irritated" (5-1-30). Participant Louise stated that she
"really has to listen" (6-1-18): "I can't keep goin' I feel like I'm straining all the time to hear...you know"(6-1-17). A bit later, she comments on how this straining to listen affects her: "{It} makes you oh {sigh}I'm played out but why am I'm not doing anything why am I played out?" (6-1-18). She also stated that missing things in conversation made her feel "like you've lost something"(6-2-3).

Other emotions or discomfort that participants commented on may also be classified as "feeling stress". The following quotation (from Louise) speaks to her feeling of embarrassment related to her hearing:

I: ...what do you do in situations where it's difficult to hear? Do you ask people to>
L: <I say pardon me \{raises pitch\} (u-huh)...and if I do it three or four times then I'm embarrassed and I ..I withdraw (u-huh) then (u-huh)..and don't say anything (6-1-13)

One can see how feelings of stress may affect how one reacts to hearing challenges, for example, here Louise abandons her attempt to understand because she feels embarrassed. This is also evident in the following comment by Betty, who reports that she feels bothered and self-conscious when she misses conversation:

I: Does it bother you to miss parts of conversations?
B: Well yes because you don't you're not sure what to answer you know if you haven't heard it clearly and the and uh the discussion goes on and it's turned to you well never that's when I feel self-conscious because I have let some things go by rather than ask them again what they said if I've asked two or three times I don't like to keep on saying that or they would probably drop me out of the circle \{laughs\} (7-1-8)

This last reference to being “dropped out of the circle” follows a previous interview question asking Betty if her hearing difficulty has changed her social contacts in any way. She said she didn't think so. In this quote, however, we get another glimpse of the balancing act participants engage in, the cost vs. benefit analysis: persevering to understand missed conversation has to be weighed against the fear of being excluded or shunned by cohort members as a conversational misfit. The comment from Betty, quoted under the discussion of “avoiding”, links the dimension “avoiding” to the dimension “feeling stress”:
B: we were out a lot and in groups of people and it’s very hard to get all the conversation. I just let it go on holidays. pretended I was understanding. hope I looked right but (1 sec) it’s hard. I think I’m going to have to get one {a hearing aid} because I find that I’m not. taking part in any of the talking because I’m not sure what they’ve said and I don’t. I want to uh not say something that doesn’t fit in with it so…uh (7-5-1)

In an effort to fit in, to “look right” as Betty puts it, participants hold back from taking part in conversation. Phyllis echoes Betty’s comments: “I think you may maybe hold back a tiny bit (u-huh) because you’re afraid you might..say..the wrong thing maybe you’ve got the wrong uh thing out of what was said to you you know what I mean?” (2-4-16). More will be said on this below when the dimension “effects on relationships” is discussed.

From these comments above we see the wide range of stressful emotional feelings that accompany hearing challenges and their consequences. A consequence of particular concern that leads to feelings of stress appears to be the fear of not fitting in socially and of being socially ostracized. We see how feelings of stress may be linked to, and even affect, how one chooses to react to hearing challenges.

Self-contradicting

The next dimension identified under the property “reacting to consequences” is “self-contradicting”. This refers to participants’ tendency to make statements about their hearing that are opposite or very different in meaning to statements they expressed previously. Here is a quotation from Janet, following her hearing test: “I hate them {hearing aids} but I’d have to do it I guess. I think they’re ugly (u-huh…yeah) really ugly…could put my hair down over my ears {both chuckle}…but we’re talking quite normally now” (3-4-8). In one phrase Janet comments on how she would wear a hearing aid even though she is not keen on the idea and then she immediately switches the topic to draw attention to how she has no trouble hearing me (when in fact, my review of interview transcripts and my research notes indicated that Janet frequently had trouble hearing my questions).
Self-contradicting was also noted in the way Janet responded to questions on the "client intake history form". For question 5, "Do you experience difficulty hearing in any of the following situations?: on the telephone, the television, social gatherings, at meetings", Janet answered "no", but in her subsequent chat with the audiologist, she acknowledged her hearing difficulty, as she did with me in interviews. As well, on this form, Janet indicated that it was her idea to have her hearing tested, whereas, her comments in interviews demonstrated that the test was scheduled at the prompting of her daughters.

Cheryl engaged in frequent self-contradicting as she grappled with her inner turmoil around her hearing. When asked how long she thought she had had problems hearing, she replied: "Well I think probably I’ve had problems for about five years now I think (u-huh) (1 sec) if it’s a problem” (1-1-4). Her self-contradicting continues in our next interview: “It’s just like in this art class I mean they’re sort o’talking about something on on the other side of the table and …and. I don’t hear it (right) but you know I don’t really have to hear it either {laughs} except it may be about my lesson I don’t know” (1-2-10). This turmoil persists even after she has her hearing tested and has already booked another appointment with a view to trying a hearing aid. We will pick up the thread of this discussion in Chapter 8.

Self-contradicting was observed to happen within the same turn in interviews, or would happen later in the same interview, or in a subsequent interview. In summary, self-contradicting seems to reflect the conflict within a participant about her perception of her hearing and the process of deciding whether or not hearing is a problem, and if so what should be done about it.

**Minimizing**

"Minimizing" is the final dimension of "reacting to consequences". This refers to a tendency of participants to downplay the hearing difficulties and consequences they experience. For example, participants minimize their hearing problems by rationalizing, for example, that the unheard comments of strangers are not important enough to worry about, as Marjorie mentions in discussing the conversation that occurs between hands at a
bridge game: “Particularly if you’re playing with strangers what they say often isn’t
important to you particularly” (4-2-2). The following comment from Louise reflects a
similar sentiment:

I: Do you still feel bothered by missing it {conversation} or do you
feel (unh-unh) it’s not as important because there’s
L: no because I don’t know them it’s not important
I: I see…it’s not important
L: It’s not important that I should know what strangers are saying
...maybe I I’m wrong I don’t know...but um (2 sec) it doesn’t really
worry me if I miss something that a stranger says to me...no (6-4-13)

Unheard conversation on topics that are of no particular concern to participants
may also be an example of minimizing:

I: Does it bother you that you’re missing what’s said
B: Well when I’m out like that with G {spouse} it doesn’t bother me
I don’t think I uh usually it’s park things that they know about that I don’t maybe
know anything about (7-2-5)

This may be an example of minimizing, or it may reflect Betty’s genuine sentiment that it
really doesn’t matter if certain information passes her by.

Minimizing was also evident in remarks made by some participants to the effect
that even normal-hearing persons have problems hearing in certain situations. Note the
following comment made by Marjorie when asked if she has problems hearing her
daughter: “No not really um if she’s in another room and says something you know in a
normal voice I I don’t hear her but actually this apartment is fairly soundproof so uh it’s
uh I don’t know I think it’d be difficult to hear anyone in another room anyhow” (4-4-4).
Cheryl also remarks on her difficulties hearing her husband from another room: “He
forgets sometimes I mean if I’m in the kitchen and he talks to me from there I say you
know I can’t hear you well I mean I normally I wouldn’t hear him anyway I’m sure I
wouldn’t if I was in the kitchen...turning the water on or something like that” (1-1-12).

Participants remarked how hearing problems are of little concern because their
lifestyle is so quiet:

I: Do you think your hearing problems have affected your quality of life?
J: No
I: Not at all?
J: No...not at all...no...no...we live a very quiet life now anyway you
know (u-huh) (1 sec) so I don’t think so (3-4-10)

There are thus a variety of ways that minimizing is manifested. It is possible to interpret “minimizing” as a face-saving strategy that serves to downplay the impact of hearing loss in participants’ lives and deflects attention away from their own or others’ preoccupation with their hearing difficulties. To summarize, the reactions to the consequences of hearing problems are wide-ranging. Some hard-of-hearing persons may have no trouble acknowledging or accepting their hearing difficulties while others consistently downplay their challenges. Still others vacillate between these two positions, even within the same sentence, revealing the dilemma within their minds as they grapple with how to interpret and deal with their hearing challenges. Later we will examine how participants’ reactions to their hearing may have changed over the course of this study. Let’s now examine the wider-range longer-term impact of hearing problems.

** Longer-term Consequences

“Longer-term consequences” refers to the longer-term impact the challenges of hearing have had on participants’ lives. These consequences represent the cumulative effect of reacting to individual episodes of hearing challenges on a frequently recurring basis over many months and years. These consequences affect family members and friends as well as the participant. They are an extension of the property of “reacting to consequences” in that “longer-term consequences” are not restricted to the impact on immediate verbal communication. “Longer-term consequences” in this study were seen to have two major dimensions: 1) effects on relationships, and 2) security issues. “Effects on relationships” in turn has two important sub-dimensions: a) reduced quantity of interaction, and b) reduced quality of interaction.

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2 Another interpretation is that “minimizing” highlights a point that has been often overlooked by self-assessment tools and by clinicians in the zeal to make everything audible to hard-of-hearing persons: Not everything that is audible has equal importance or priority to the hard-of-hearing person (or, for that matter, to the normal-hearing person).
Effects on Relationships

In the present study, two dimensions of "effects on relationships" were identified: "reduced quantity of interaction", and "reduced quality of interaction". As we shall see, these two dimensions are inter-related: a reduction in the quality of interaction often leads to a reduction in the quantity of interaction, and vice versa.

Reduced Quantity of Interaction

"Reduced quantity of interaction" refers to the decrease in the amount of time a participant spends interacting with other family members or friends as a result of her hearing problems. As the above discussion of "avoiding" and "abandoning" showed, participants may withdraw from conversation as a result of hearing difficulties. In addition to conversational withdrawal, there is evidence of social withdrawal. Participants report going out less and avoiding crowds because of hearing difficulty, as illustrated here by Betty: "I... go out less because I don't like to go out in a crowd because I don't hear what they're saying" (7-4-13).

Even if a hard-of-hearing person doesn't withdraw from interaction, a sense of social isolation may be imposed by hearing loss. Phyllis, for example, stated: "I don't hear the phone real good (right). But um (1 sec) I've kept that old phone because it has the (1 sec) louder ring (right) but it's now got not quite loud enough" (2-2-10). As a result, Phyllis's friends have trouble contacting her: "Well I've had phon' friends phone and they say.. where have you been? and I say well I was right here.. um{mimicking doubtful tone}well I phoned two or three times and I said oh I guess I was watching the ball game and I {chuckles}I have it{the TV}quite loud for that (right) so um (1 sec) I didn't hear it" (2-2-10). This example demonstrates how hard-of-hearing persons who cannot be contacted may miss out on social opportunities. Of greater concern is how such social isolation may impact one's safety, as will be discussed shortly. Social isolation may also be imposed by the inability to joke or "kid" or otherwise missing out on the former spontaneity of conversation, as Phyllis notes:
P: I can't kid with people the same way I used to tease you know? and that (yes) sort of thing?...because I don't get their comment back or I maybe didn't hear what they said in the first place you know... well I think you change that (u-huh) um...my husband was a great kidder you know he liked to tease and and um...not that it made any difference there really but I think it made me a little bit more (2 sec) not self-conscious exactly but (2 sec) not quite as spontaneous with with things that I could have said or done...as (1 sec) if I heard it heard it properly (2-4-16)

This is an example of both reduced quantity and quality of interaction. Through conversation, or rather the lack of it, one's quality of life is affected, because a way of relating to others that used to bring joy to one's life is now inaccessible because of hearing problems.

Another example of the interaction of these two dimensions is found with Marjorie. Unbeknownst to Marjorie, her granddaughter (age 12) reports to Marjorie's daughter that she does not want to spend as much time with granny because granny misses much of what the granddaughter says to her. The following quote is from the interview with Marjorie's daughter:

D: J's {granddaughter} complaints have been uh...more noticeable in the last year (hm)... and I've noti' y'know I continue I have continued to notice that she's not hearing (u-huh u-huh) and I've felt it's a little more urgent t' see if somethin' could be done to improve the quality of her life
I: Right and how do you think it makes J feel?
D: It makes her feel like not being with granny...(hm)
I: And they're close?
D: They're close // granny does not know and I would not tell her to hurt her feelings that J has told me she doesn't want to be with granny...because of...that so I think it..it has got worse in the last year (u-huh) and I don't think granny realizes the extent to y'know that that is happening that her granddaughter doesn't really want to spend time with her cause it's getting annoying...not being heard all the time and repeating all the time (4-d-3)

To summarize, hearing problems affect relationships by reducing the quantity of interaction between the hard-of-hearing person and others. This may be manifested in several ways: a reduced amount of time spent with friends; avoiding making new friends by reducing new social contacts; and, setting limits
on kinds of conversational interactions (e.g., jokes). Moreover, such reduction may be initiated by participants (e.g., by shunning opportunities to make new friends) or by others, and such reduction may happen intentionally (e.g., M’s granddaughter) or unintentionally (e.g., lack of phone contact).

Reduced Quality of Interaction

“Reduced quality of interaction” refers to how participants’ hearing problems have jeopardized the quality of interaction in their relationships with others, primarily with family members. This may occur whether or not there is a decrease in the quantity of interaction. As illustrated above, Marjorie and her granddaughter have both reduced quantity and quality of interaction with each other. Marjorie’s daughter feels this is having a negative impact on her mother’s quality of life.

Hearing difficulties are a source of discord between the women in this study and their husbands. The emotional toll on the spousal relationship is an example of “reduced quality of interaction”. For Betty, the discord related to poor communication between herself and her husband was so strong as to be a major trigger for her in booking a hearing test:

I: And uh can you just describe again for me why you you decided at this time to have the test as opposed to say six months>
B: <well G {husband} and I are not hearing each other well {slight laugh} and it sort of gets on your nerves when you’re repeating repeating for somebody and they don’t hear and they don’t hear and so I decided it was going to be a problem between us if we didn’t get along with it and have it investigated/>
I: and so now you’re saying what I’m hearing you say is that you’re doing it now because you’ve noticed that these problems have (u-huh) gotten worse over the last year or so
B: u-huh yeah
I: Has there been any specific situation that.. made you say ok tomorrow I’m booking the hearing test
B: no no I don’t.. I’ve been going to book it for.. some time and you know well I think that probably one day that..he didn’t hear me at all and I didn’t catch what he said we were at each other all the time (7-1-10)
Betty's concern is as much for her husband's inability to hear her as it is for her inability to hear him. The intricate and intimate nature of the special communication between husband and wife may be described as a "communication dance", a term that will surface again a little later when this phenomenon is discussed further.

Security Issues

The second major dimension of "longer-term consequences" is "security issues". "Security issues" refers to a participant's feelings or sense that her safety or the safety of another family member may be endangered as a result of her hearing difficulties. As outlined above, participants worry that they may not hear a spouse when they need to for health reasons. In the interview with Cheryl's spouse, he mentioned that he thought there was one incident that triggered his wife to book a hearing test, but he couldn't recall what it was. When I asked Cheryl about it she said: "probably might ha been when he had his heart attack or something and I...didn't realize there x was a problem because he did call me...maybe..but I I mean I was there (u-huh) pretty fast..I don't think there was any delay in it" (1-2-5). This incident is obviously important to Cheryl and seems to evoke a sense of guilt even as she speaks about it two years after it happened. Events such as this likely act as a "wake-up" call to a hard-of-hearing person to realize the threat to security if she or he cannot hear a family member or important sounds in the house in times of crisis. Of course, the awareness that there is increasing potential for crises also becomes stronger with aging.

Janet mentioned that she feels responsible to hear for both herself and her husband in their home, since his hearing is quite poor and deteriorating. The onus is on her to answer the doorbell and telephone, and even alert her spouse to alarms:  

J: cause I answer the telephone and he doesn't hear it...so if I got to that point then it would be...a very serious thing (1 sec) cause I hear the doorbell an s' at home and and all this sort of thing he never does...(right)...and with three phones here he doesn't hear any one of them (1 sec) so it'd be bad if I...lost my hearing completely (3-4-4).
Outside the home, safety concerns are an issue. A decline in hearing threatens Frances because it is very important to her to be “alert and aware” of her surroundings in any situation:

F: Because I like to drive..and I like to drive uh if I want to get in the car and I feel well I’m gonna go to Ontario or I’m going to go...I have relatives all over the States and I just want to go..I’d want to know.. if I hear somethin’ behind me or not (1 sec) (u-huh) I think that is important (5-1-9)

One gets a taste in the above comment of how a threat to security may also be a threat to one’s sense of freedom and independence.

In summary, hearing problems have been shown to affect both the transactional and the interactional aspects of verbal communication between partners. Furthermore, both the quality and the quantity of interaction are affected. Moreover, one’s sense of independence and effectiveness may be at risk if hearing problems cut one off from important environmental sounds. These effects all play a part in the self-assessing process. The following section will describe the influences that emerged in determining participants’ reactions to hearing challenges and their consequences.

Influences

There were many influences that emerged in this study that affected participants’ reactions to hearing challenges and their consequences. The property of “influences” refers to factors in a participant’s life that may contribute to how a participant perceives her hearing from day to day, week to week, month to month, or even from year to year. These factors impact the nature of the hearing challenges a participant faces, how she may react to those challenges, their consequences, and how she reacts to those consequences. Because the process of self-assessing is closely tied to help-seeking, the “influences” that affect the self-assessing process also affect help-seeking. The dimensions associated with the property “influences” that emerged in this study are: a) relationships, b) aging, c) lifestyle, d) external factors, and e) chronology of hearing challenges.
Relationships

“Relationships” refers to the connection or association between the participant and another person with whom she spends time and to whom she has an emotional attachment. The dimension of relationships consists of three sub-dimensions: 1) spouse, 2) other family, and 3) friends and cohort members. Spouse, other family, friends, and cohort members (peers) are frequently collectively referred to as “other” in the following discussion.

One other category of relationships related to hearing is that between participants and hearing health professionals, which includes the audiologist, and may also include the participant’s family doctor, and/or ENT. However, because participants only form these relationships once a help-seeking step is taken, they will be considered separately in Chapters 7 and 8 when help-seeking is discussed.

Spouse

This section describes the influence of “spouse” in the process of self-assessing (and in turn help-seeking). The influence of spouse in this study was tied to how participants and spouses communicated with each other: the intricate interplay among physiologic, psychosocial and environmental factors that contribute to the inter-dependent “communication dance”. The notion of communication dance is summarized well in a joke Betty told me early in my first interview with her, as she related her hearing problems:

B: the old fellow went to the doctor to see if there was anything he could do about his wife’s hearing... and he said to her{sic} well does she hear you only when you’re looking at her or or if she’s got her back to you doesn’t she hear you well he didn’t really know. So he said well you find out you see what her problem is and then come back. So he came in this one day and he said I’m home dear what’s for supper? He called to her. No answer. So she he went to the next room and Hi dear I’m home what’s for supper and he kept this up til he was right behind her. She finally turned around she said you silly old coot I’ve told you seven times it’s chicken! {both laugh}. G {B’s husband} and I figure we’re like that (7-1-3)
This story of Betty’s communication relationship with her husband fits right in with what Janet described after I interviewed Janet’s spouse:

I: when he {J’s husband} says about you that, he’ll say something and he.. thinks you’re not hearing him
J: I am hearing him but there’s no point in answering him half the time cause he doesn’t hear the answer {laughing}
I: So.. there may be times when you’re really hearing him but he thinks you’re not because you you don’t answer
J: That’s right
I: Ok.. are there times when you don’t hear him do you think?
J: ...Oh I don’t think so
I: No?
J: I don’t think so

As Janet demonstrates in the above quotation, a participant’s perception of her own hearing may play a role in her report of how her spouse fares in communication. Janet perceived her hearing problem to be very minimal (or at least did not disclose it to others), and would not admit to any instances where she did not hear her husband. She thus attributed all communication difficulties between them to his hearing loss. Reports of communication success and failure between wives and husbands in this study seemed to depend on differing and often conflicting perceptions of the performance of the self and the other.

All three spouses in this study had significant hearing loss: two were long-time hearing aid users and the third had his hearing loss diagnosed at the same time as his wife. Each wife in this study reported some degree of discord communicating with her husband, and each attributed such problems in part to her husband’s hearing. The experience participants had with their husbands’ use of hearing aids also influenced them. Participants highlighted many negative aspects of hearing aids, and these may have contributed to delays in help-seeking. Positive aspects, however, were also noted. These positive and negative aspects are discussed in detail in the next chapter.

For aging couples, there is a noteworthy link between health and communication. This is illustrated in a very poignant story related by Louise of how she missed the last

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3 This situation is probably quite common in this cohort as most husbands tend to be older than their wives and may have had more exposure to high levels of noise.
words her husband spoke on his deathbed because his voice was so frail from Parkinson’s disease that she could not pick up what he said:

L: I felt feel...I still feel very bad...just before he died he wanted to tell me something and I didn’t get it...
I: You didn’t hear it
L: {shakes head} his voice was so low it was just a ..below a whisper... (hmm)..and I didn’t hear it (1 sec) so I dunno
I: And there was no one else
L: there was just he’well there was four patients in the room and their visitors but just he and I..I was wishing D{her son} had o’been there he’d a heard it (u-huh) but uh (1 sec) he didn’t {teary}...(u-huh)...and so (u-huh) {voice stronger} anyhow that’s the story (6-1-17)

This example highlights how communication between partners depends on much more than hearing. In this case, as well as with Betty who had vocal weakness, the compromised vocal ability of one partner coupled with the hearing loss of the other resulted in severe communication difficulty. This example also highlights the longer-term impact that breakdowns in the communication dance between husband and wife may have in influencing participants perceptions of their hearing.

Comments by participants revealed their perception that women attach more importance to the social, or interactional, aspects of communication than men. Phyllis describes how her next-door neighbours (husband and wife) fared differently with hearing aids:

P: she was ok but he wa he wasn’t you know (u-huh) he just didn’t {persevere with his hearing aid}..course I don’t know that he really wanted it you know {small laugh} (right) I think men sometimes they don’t they’re not as social as women are I don’t think do you? (right) and especially when you get old and and uh um..men don’t have men friends the same way as women have women friends (2-4-1)

My research notes reveal that Phyllis made a similar comment to me in the waiting room before her audiology appointment. In these comments, Phyllis hints at the different social roles women and men play which may result in different perceptions of the importance of hearing. Betty’s comments in her journal describe a home environment where her husband spends “a great deal of time building in the basement” (7-j-Feb28). She follows this up in our next interview, talking about car trips: “I think he’d drive for hours and never speak//
I can’t keep quiet that long {laughs}...but he’s not a talker and yet when company comes in he’s very..talkative and he enjoys talking to people..but at home we’re very quiet” (7-2-2). Such comments suggest that one member of a couple (in this case the husband) may place a lower value on verbal communication with a spouse than with others.4

Let’s look now at how spouses in this study perceived their wives’ hearing. Here is the first comment by G, Betty’s spouse, in my interview with him:

I: I’d like you to describe your wife’s hearing
G: (3 sec) My wife’s hearing...sometimes she misses what I have to say but not very often... I don’t think there’s anything really wrong with her hearing (u-huh) (B: oh dear!) but she thinks there is (B: u-hmm) (1 sec) no I would say that um lot of the the discussion we have about hearing is if we’re in a different room or another room or something like that but when we’re across the table there’s no... I think distance might have something to do with it (u-huh) when we’re furth-you know further away but I don’t think she uh I can’t recall oh sometim-she can’t hear the clock.. strike.. I can hear the clock strike in bed but she can’t hear it that’s the only real difference (B: xxx) but uh and sometimes birds I can hear birds that she can’t sometimes (u-huh)... but I think that’s about the only...she she doesn’t ...yeah she doesn’t hear our friend L too well sometimes and I have to sort of fill in for her...and sometimes I guess our grandson N sometimes speaks you know the teenagers don’t pronounce too well and she misses a few things ..but I miss them too and you know because it’s a kind of a different lingo that they speak (7sp1)

It is interesting that this comment includes some of the same dimensions of reactions identified earlier when talking about participants’ reactions to their hearing challenges: there is self-contradiction in G’s comments as well as a minimization or downplaying of hearing situations that he can rationalize as due to other problems besides his wife’s hearing. His opinions had a great influence on Betty, as we will see later in the discussion of the interpretation of hearing test results. In general, participants’ husbands did not report that their wives had much difficulty hearing. We’ll continue this discussion below as we consider the perception of other family members.

4 Where hearing loss is an issue, however, one may speculate that communication is avoided with a spouse out of a need for quiet and refuge, especially in the home environment, as discussed by Hétu et al., 1993.
Perhaps influenced by this perception of their wives' hearing, as well as their own poor hearing, spouses appeared to make little effort to utilize strategies to improve communication with their wives. Cheryl remarked:

C: when he’s sitting in there and I’m sitting on the sofa and he’s...inclined to ...mumble a bit... and I find oh why can’t you just... realize that I don’t hear you! {chuckles} and I have to keep asking him to repeat himself (2 sec) so it’s uh that’s an irritation...but that’s just because it’s the two of us you know I’m sure if it was an absolute stranger I wouldn’t .. think anything of it {laughs} (1-2-7)

This comment again speaks to the feelings of stress that may accompany poor communication, and to the higher expectations or lower frustration thresholds that may exist in conversation between intimate, compared with less intimate, communication partners.

To summarize, a key component of the influence of spouse on participants’ self-assessment of their hearing relates to the communication between these two parties. Several factors emerged in this study as contributors to communicative success or failure. These were the hearing status of each party (impairment and disability), the functioning and use of hearing aids (owned by husband), co-occurring health conditions (such as may affect vocal capabilities, for example), the accommodative strategies utilized, and the value each party places on conversation both in terms of social roles and the perceived importance of communicating verbally with the other. Such factors are not exclusive to the communicative relationship between participants and spouses, but the longevity and intimacy of this relationship likely renders the effect of these factors more intense than in other relationships.

Other Family

“Other family” refers to the reported and observed reactions and responses of close family members (besides the spouse) to a participant’s hearing. A striking finding in this dimension is this: Compared to the report of the mother, each of three daughters interviewed (daughters of Phyllis, Marjorie, and Louise) reported her mother to have a greater degree of hearing loss and to have had a hearing problem for a much longer time.
Each of these three daughters spoke of having urged her mother to get a hearing test for several years. Each also gauged the severity of her mother's hearing problems to be greater than gauged by the mother herself. Participants expressed surprise to hear that these family members' perceptions of their hearing were different from their own perceptions. Louise, who reported her hearing to be down for about a year, wrote in her journal the day I interviewed her daughter: “found out that M {daughter} thought my hearing has been leaving me for about 5 yrs. That was a surprise.” (6-j- Mar 21). When the reports of “other family” are compared with the reports of “spouse”, one sees that participants’ accounts of their hearing difficulties tend to fall between the accounts of spouses and children, both in terms of reported severity of the problem and the length of time hearing has presented a problem. The only possible exception to this in the present study was Janet, whose own description of her difficulties was admittedly less than both husband and family.

Each daughter who was interviewed felt she had been instrumental in some way in moving her mother toward booking a hearing test, usually by subtle or not so subtle nagging. When I asked Marjorie’s daughter why she thought her mother booked a hearing test now, as opposed to say last year, her response was “Cause I put the pressure on” (4-d-4). Janet describes a similar sort of pressure: “The girls said Mum do something when you’re out there then {visiting from Ontario}..do something (oh I see) so I thought...well alright I will!” (3-1-15). Janet’s daughters appear to be quite insistent that their mother take action. Phyllis’s daughter herself took action by arranging for a friend of hers who wears hearing aids to visit Phyllis and demonstrate how a hearing aid works. Phyllis stated that this was a major influence in her decision to get her hearing tested.

It was interesting to observe that, even though these daughters, unlike spouses, were acutely aware of their mothers’ hearing challenges, there was little evidence that they made any conscious effort to accommodate their mothers by altering their own speaking habits or by encouraging other family members to speak more clearly. In this respect, the behaviours of daughters and spouses were similar. For example, both Phyllis’s and Louise’s daughters were observed to be very rapid talkers. Marjorie’s teenage granddaughter was observed to be both a rapid talker and extremely soft-spoken. Family
members, husbands as well as offspring, appeared to have no problem repeating comments for participants, but they seemed generally unaware of, or unable or unwilling to alter, their speaking habits in a way that would help participants understand conversation better. Participants only occasionally made mention of this lack of accommodation as an issue that bothered them in any way (as Cheryl quoted above did). Participants see hearing loss as their responsibility; others should not have to make special allowance for it, as illustrated here by Louise:

I: Do you think you should ask D {her son} to speak out more?
L: Well if I say D I didn’t hear you he speaks up but no I feel that this is something I’ve got I know I’ve got to have a hearing aid and get it looked after so I don’t have to keep saying… (I see) uh I shouldn’t have to say to people speak up so I can hear them (u-huh) umm I should look after that and have something done about it without doing that (u-huh) now maybe I look at life wrong…but uh I shouldn’t feel I shouldn’t have to keep saying pardon me or could you..I didn’t hear you (6-4-11).

On the other hand, previous discussion has shown how participants’ strategies of “avoiding” or “abandoning” may limit their participation in conversation; thus there is evidence that others’ lack of accommodation to participants’ communicative needs indeed has an impact on these women.

Friends and Cohort Members

The influence of “friends and cohort members” refers to how characteristics or opinions of others in the same age range or social community as a participant may make an impression upon the participant’s thinking and action. Not surprisingly, the women in this study socialize mostly with others of their own generation. They tend to compare themselves to others in their cohort and conclude that many of their peers have hearing problems too. In the following exchange, Janet had just answered “no” to my question of whether she thought her life would be any different if she heard better:

I: when you say it wouldn’t make a difference if you..heard better..or not because you have>
J: <No I think cause so many of them {friends} have problems too so it wouldn’t matter (3-1-14)
This comment reveals an interesting logic. At the same time that Janet acknowledges having a hearing loss, she downplays or minimizes its importance because of the hearing problems of others.

Participants also comment that many among their cohort fail to acknowledge hearing problems:

L: Wednesday I went to the uh (1 sec) um... luncheon everybody was talking and everybody ... talking quite loud and they were announcing things and our whole table didn’t hear it... and so I don’t if it wasn’t just me... there’s a lot more needs these things in my ear in your ears than me I think..(u-huh) cause nobody heard what they were saying.. and I don’t know what they were saying (6-2-1)

Because these women are surrounded by their peers who may have similar hearing, there are at least two factors that may lead participants to conclude that their hearing is not a problem. First, peers empathize with others with regard to hearing, as illustrated by Louise’s comment: “I kept saying to everybody that I’d have to get one of those things for my ear (u-huh) they laughed at me... but... they said oh no you won’t you’re not that deaf I’ve seen lots of people worse than you and they don’t wear them” (6-3-4). Cohort members with hearing loss appear to empathize with each other and collectively this may serve to delay action. Second, as a result of having similar hearing, they may have developed strategies to make it easier to hear each other, e.g., louder speaking voices, thereby reducing the demands on hearing:

J: I played bridge last night and there were four tables three tables.. and you know the chatter didn’t bother me at all (huh) and I didn’t have any problems at all (u-huh) so as I said in the writing {the journal} I think their voices must be better because they’re all seniors {chuckle} (u-huh) they speak louder to each other maybe normally (3-2-1).

This quote demonstrates how the concept of “normal” may differ depending on social context.

Where participants perceive their hearing to be poorer than that of their peers, they express concern for how they may be viewed by these peers, as indicated by Betty:

“I don’t like to keep on saying that {asking what was said} or they {friends} would probably drop me out of the circle {laughs}” (7-1-9). We have also seen how friends may
also collaborate with participants when they miss conversation (under dimension “piecing together”).

Friends and peers often share their experience with help-seeking, or otherwise “show the way” to participants who are looking for solutions to hearing challenges. Marjorie, for example, has a close friend who is a successful hearing aid user: “I never noticed it {her friend’s hearing aid} until I decided well I better get my hearing eh? they they’re so neat these hearing aids nowadays you know you don’t really (1 sec) particularly notice that they’ve got them” (4-1-12). Those who have had hearing tests sometimes helped a participant by recommending a particular audiologist, as with Phyllis’s daughter’s friend. Those who use hearing aids, such as Marjorie’s friend, helped to “demystify” hearing aids for participants simply by wearing them.

To summarize, participants’ personal and social relationships influence their self-assessing and help-seeking for hearing. Communication satisfaction hinges on many factors affecting both parties in a conversational dyad. Communication relationships with family members, especially spouses, may be particularly challenging for wives at the same time as they are intimate and important. These significant others do appear to frequently serve either as catalysts or as inhibitors to help-seeking. For example, the influence of friends and peers tends to delay help-seeking, but they may serve an enabling role once the decision to seek help is made, by role modeling successful hearing aid use and passing along important word-of-mouth recommendations.

Aging

As discussed in the review of the literature, there is a commonly held belief that as one’s body ages it deteriorates and the auditory system is no exception. In this study, the influence of “aging” refers to comments by participants that reflect this belief, linking hearing challenges with getting older. Participants perceive that hearing difficulty is a “normal” consequence of aging, something to be expected. “Something has to go at this age” is how Frances phrased it (5-1-26). Phyllis commented: “Well I guess it’s {her hearing} just something that’s wearing out..you know..my ears..along with everything
else.” (2-1-19). To the extent that older hard-of-hearing persons feel that hearing loss is something to “put up with”, the aging dimension is one that usually serves to delay help-seeking by contributing to one’s perception that hearing is not a significant problem. Hearing loss may not be viewed as aberrant, and thus needs no attention. “Aging” is closely tied to another dimension of influence just discussed, that of “cohort members and friends”. If hearing problems and lack of action are the norm of those around you, is there any compelling reason to take action?

Lifestyle

Another factor that influences the process of self-assessing (and help-seeking) is the dimension of “lifestyle”. This refers to how one’s living arrangement and activities influence hearing challenges, their consequences, and reactions to challenges and consequences. Three subdimensions of ‘lifestyle’ emerged in this study. Compared with their lifestyle of years past, participants were noted to have 1) a reduced social sphere, 2) a reduced activity level or change in activities, and 3) a more stable and predictable lifestyle. Several factors emerged in this study that may collectively contribute to this situation: living alone, reduced socializing outside the home, reduced activities or reduced shared activities between participant and spouse both at home and outside the home, a dwindling of one’s cohort with increasing age, and reduced mobility due to physical restrictions or security issues.

Participants who live alone commented that their hearing is fine for them because the demands on hearing when one lives by oneself are minimal and one does not have to consider others. As Marjorie stated: “My hearing seems alright to me” (4-1-7). Phyllis wrote: “being alone I can have the TV as loud or soft as I want” (2 j 4). A further comment she made was: “I can stand it {her hearing} fine around the house by myself {laugh} you know it’s only when I go out or when I have the family in or the children here.. that it bothers me” (2-2-5). Louise felt that hearing was less problematic living alone: “you’re just quiet and you do your own thing” (6-2-1), and “I don’t feel it...because I’m alone and it’s just.. natural” (6-2-2). Marjorie, who lives alone, was observed to have a very stable and predictable lifestyle, with a social life devoted almost
exclusively to playing bridge, a highly structured activity that, perhaps not coincidentally, places relatively few demands on hearing.

Participants, particularly those who live with their spouses, commented on the fact that as a couple they socialize much less now than they used to: they go out less, and they entertain less, as illustrated by Cheryl: “I don’t do an awful lot (right) and I don’t have we don’t we don’t have a large social life at all” (1-4-11). Perhaps related to this is the fact that one’s social sphere is reduced by attrition as one ages. Both those who are married and those who live alone remarked on how their cohort is dwindling in number. As Janet stated: “most of our... friends have gone.. (u-huh u-huh) our old friends have gone (u-huh) (1 sec) uh..so we have a handful left (2 sec) and we’re the oldest...in our group where we live” (3-1-14).

As mentioned in the previous section, it is apparent from journal and interview comments and my observations (all in reference to the home environment) that husbands and wives in the present study don’t share many activities, TV being the most common (and where disputes over volume settings arise). Outside the home as well, participants may follow their own schedule. For example, after listing many of the activities she likes to do while spending winters on the west coast, I asked Janet whether her husband likes doing similar things. She answered: “No he doesn’t he doesn’t like any of those things! {both laugh}” (3-1-5).

“Lifestyle” in this study tended to influence participants in the direction of concluding that hearing is “not a problem”. One notable exception in this perception, however, has already surfaced in previous sections: security issues. Many present or future worries about hearing relate to how secure one may or may not feel in one’s life as hearing problems are experienced. For example, one may be prompted to consider hearing to be a problem if one feels one is missing important household sounds, as Frances noted: “I think it’s {hearing} important (right) u-huh (1 sec) cause something can happen in the house and uh you don’t hear it it’s not good” (5-1-17). Missing environmental sounds is also a concern, e.g., when one walks alone outdoors, as Louise relates: “if I’m walking.. I don’t hear somebody comin’ up behind me (1 sec) and that’s not good in –{city name}...uh..yo’ I have to be very alert” (6-1-15). Frances also mentioned this concern, as
well as a concern that she hear well when she’s driving: “Because I like to drive// I’d want
to know.. if I hear somethin’ behind me or not” (5-1-9). The lack of visual cues in these
situations contributes to the sense of apprehension. Also, recall the link to the “aging” and
“security issues” dimensions, with participants who have to keep tabs on spouses who
have had a heart attack or other health problem, and who fear not being able to hear them
at home. More will be said about this under the dimension of “prospective worries”.

External Factors

“External factors” is another dimension of influences. External factors are factors
unrelated to presbycusis that participants cite as the source of their hearing difficulties.
First, there are the speaking style and communicative intent of participants’ partners in
conversation. For example, waitresses, TV actors, commentators and telephone
receptionists don’t speak clearly and/or they speak too quickly, as illustrated by Frances:
“This girl is answering the phone and she go tatata and the name (1 sec) why does she
have to speak so fast?” (5-1-11). Family members mumble and people drop their voices at
the ends of sentences: “when I sit down in that den...D {her husband} is usually on my
left... and that’s when I have difficulty hearing...not necessarily because... of the hearing
but because he speaks sort of (u-huh)...mumbly to the television (u-huh) {laughs}”(1-3-5)
Youth were often cited as the culprit in participants’ (and their spouses’) hearing
problems, with those who are around teenagers quick to point out that teenagers “don’t
really want you to know what they’re saying” (7-1-8). While such comments have some
validity, in part these comments also reflect a natural tendency to assign blame or
responsibility outside oneself for problems encountered, rather than admit a personal
limitation. The best example of this was the frequent comment that the voices of
conversational partners (including my voice as interviewer) were very quiet. Cheryl notes:
“there are some friends....you know who talk very very quietly” (1-1-5).

Other external factors deemed responsible for hearing difficulty were physical or
cognitive problems, such as the effects of a flu or cold affecting hearing, and concentrating
or having one’s attention elsewhere:
M: quite possibly I don’t hear everything she {her daughter} says but I might just turn it off too {chuckle}
I: {laugh} so it might be just attention sometimes? {responsible for not hearing something}
M: Mm I might be thinking of something else or something like that (4-4-5)

Machines such as answering machines and old TV’s were also cited as problems. This is not to say that some of these comments do not reflect legitimate concerns that contribute to hearing difficulty. However, it is interesting that those participants who admitted to having little or no problem hearing seemed particularly quick to point out external factors, for example, factors in their environment or the shortcomings of communication partners, that make hearing difficult.

Chronology of Hearing Challenges

The final dimension of the property of “influences” to emerge from the data in this study is termed “chronology of hearing challenges”. This refers to a participant’s perspective on her hearing over time; a comparison of her hearing from a time in the past when she perceived her hearing to be “good”, to a projection of her hearing in the future. Two sub-dimensions are identified: 1) retrospective; and 2) prospective worries.

Retrospective

“Retrospective” refers to a participant’s reflection on the course of her hearing difficulties over time, from a past time to the present. Specific questions that were used to elicit reflection on this topic in interviews were: How long would you say it’s been since your hearing was good? How long would you say your hearing has been a problem? These questions were also posed to the family members who were interviewed.

There was a range of responses to these questions. Some participants compared their present hearing with their hearing in the past, as Phyllis did: “I had really good hearing before I started to lose it..I would say maybe ten years {ago}”(2-3-3). Phyllis is aware that her hearing has been down for some years, assisted in this recollection by the
fact that she had a hearing test in 1990. The perspective of some participants, such as Betty and Cheryl, changed over the course of the study. Reflecting upon her hearing seemed to make Betty aware that her hearing was a problem for a longer time than her estimate of two years in the first interview (this expanded to at least three years by the last interview). Several women remarked on how gradually hearing deteriorates: “sometimes you can lose your hearing so slowly that you don’t realize that you’ve lost some” (4-1-7).

“Retrospective” has an impact on the self-assessing process by placing a participant’s current hearing difficulties in historical context. To the extent that participants are predisposed and able to critically compare the difficulties they have hearing now with how easy it used to be to hear, they may be more inclined to seek help.

Prospective Worries

In addition to looking back at how hearing was in one’s “past life”, participants also projected into the future. “Prospective worries” refers to the fears and worries participants expressed about their hearing and its effects on their lives down the road.

Participants expect their hearing to continue to deteriorate. Janet said: “I just wonder..how fast it’ll go down’get worse” (3-4-3), hoping that hearing loss may progress slowly as other things do with age. A family history of hearing loss may exacerbate one’s worry about the progression of hearing loss: “It hasn’t come as a surprise {that B needs a hearing aid}. I felt that it’s going down all the time and it’s harder to... socialize when you can’t hear...my dad was deaf” (7-5-3). Some participants also worry that a further decline in their hearing will lead to more serious transgressions of the rules of social etiquette in conversation, for example, by saying something that doesn’t fit in. Cheryl, for example, expressed a fear that if her hearing gets worse, she may start speaking much too loudly in conversation, a trait that she finds abhorrent among other female peers: “I’d hate to get so I was speaking too loudly that’s one thing that would worry me” (1-1-15).

The greatest worries about the effect of deteriorating hearing appear to be the threat to security and the possible social isolation it may pose. There is evidence that such worries are tied to negative perceptions of hearing aids. Participants who hope they don’t
need a hearing aid now view a hearing aid as an unappealing possibility in the future. Those who anticipate getting a hearing aid in the near future worry that down the road they may have to wear two, as Louise reveals in talking about a neighbour who appears to be severely hearing impaired and wears two hearing aids: “so x this is my future.....it scares me a little bit” (6-1-15). Louise goes on to say that what scares her is the possibility of not hearing fire bells in her building at night when not wearing a hearing aid. This comment highlights how hearing aids, even if they are purchased, are perceived as inadequate to maintain one’s sense of security, which is important to one’s sense of well-being, particularly in old age.

Summary

This chapter has looked at the properties and dimensions associated with the category “self-assessing”. Self-assessment of hearing emerged in this study as a central concept in participants’ experience of living with presbycusis and in their decisions regarding their hearing. We have seen that there is a complex interplay among hearing challenges, their consequences, and participants’ reaction to those challenges and consequences. Further, many of the dimensions that characterize the self-assessing process combine with each other, for example the dimensions aging and security issues combine. We have also seen that there is a constellation of influences, most notably one’s close relationships, which acts upon a participant’s process of self-assessing. The hearing challenges participants encounter, and the affective, cognitive, and behavioural responses of participants to these challenges and their consequences, both short-term and longer-term, are determinants in participants’ self-assessing and help-seeking for hearing problems.

The next chapter explores the first three properties and respective dimensions associated with help-seeking, which is the second category in the theoretical framework.
CHAPTER 7
HELP-SEEKING

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The category of "help-seeking" refers to behaviours that a participant engages in to find out more about her hearing and to explore and pursue possible solutions to her hearing challenges. Help-seeking involves a search for outside resources, for example, within one's community, to help solve hearing challenges.

The data in this study revealed four properties of help-seeking: 1) disclosing; 2) booking a hearing test; 3) considering a hearing aid, and 4) the hearing test (refer again to Table 5.1 for the complete theoretical framework). This chapter will discuss the first three of these four properties and their dimensions, as listed above. In the next chapter, Chapter 8, the hearing test and its dimensions will be discussed.
Disclosing

"Disclosing" is the first property of help-seeking for hearing challenges. Disclosing refers to the act of making one's hearing difficulties known to another person or persons. Disclosing has the two dimensions of a) private vs. public; and b) family physician or specialist. The decision to disclose information about one's hearing may occur in the context of attempting to improve one's understanding of a conversation, for example, by revealing that one has difficulty hearing and asking for a snippet of missed conversation to be repeated. Or the disclosure may be made more generally when a participant may choose to confide in a friend, peer (especially a peer who also has hearing difficulties) or family member in an attempt to learn more about her hearing, others' perceptions of it, or what can be done about it. Disclosing may be considered a form of coping, and, analogous to coping, it may be problem-focused or emotion-focused.

Findings from this study illustrate that disclosing is a process. Phyllis described her version of the process:

P: I think when you're sort of... when you first start to lose your hearing you don't particularly want people to know (2 sec) um... because you are more embarrassed about it at that point... now I have to let people know or I won't know what they're talking about... but I think when you're first starting to lose your hearing you're not crazy about people knowing about it (1 sec) I know there's people... that I'm friendly with that I know they don't hear real well and they don't let on {laugh} you know I think it's just a thing that you try to cover up (2-2-11)

In a later interview I returned to this point with regard to the hearing test Phyllis had in 1990. I asked Phyllis if she was telling people at that point that she had problems hearing:

P: No I think I was more at that point.. you know where I wasn't I wasn't really letting on that {laughs} (right) that I was having trouble I did with the neighbour next door but (right) but I don't think I did with other people (2-4-3)

It is noteworthy that the neighbour Phyllis mentions in the above quote was hard-of-hearing, wore a hearing aid, and was influential in recommending the facility at which Phyllis was tested in 1990. At that time Phyllis was not ready to "go public" with her difficulties but felt comfortable discussing them with a hard-of-hearing peer, someone "in the club" who acted as a "mentor" by providing information on where to get tested and
generally demystifying hearing loss and the hearing testing process, at least to some degree.

The two reflections above followed Phyllis’s description of how she approached disclosing seven years later, in 1997:

P: I don’t hear real good and I don’t mind telling people that I don’t hear real good whether I know them or I don’t know them..(u-huh) ..and so..I guess they have to put up with me {laughs} (2-2-10)

These quotes illustrate that disclosure is a deliberate and witting act; thus, disclosing one’s hearing challenges signifies that one is aware of and acknowledges one’s hearing challenges. What one chooses to reveal about one’s hearing and to whom it is revealed, however, is given serious consideration by participants and is a process that unfolds over a number of years. Disclosure is not always easy, but the fact that participants do disclose implies that the perceived benefits of disclosing outweigh the perceived costs involved at the point in time when they disclose. It will be interesting to return to these two points later when considering the construct of “identity”.

Private vs. Public

The three quotes above suggest that there is a dimension of “private vs. public” in the disclosing process. “Private vs. public” refers to two findings. First, it refers to the finding that participants in this study generally consider hearing to be a private matter, particularly when they first become aware of hearing challenges. For example, when I asked participant Frances whether she knew anyone with a hearing loss, she responded: “Oh yeah quite a few people (quite a few people) oh yeah I never ask them..any personal questions like that (1 sec) I feel it’s an intrusion” (5-1-22). Frances’s comment implies that her own hearing is a private matter about which she would not want to be queried. Avoiding disclosure often means avoiding asking for help and pretending one hears in conversation (one of the dimensions of reacting to hearing challenges). When I asked Louise if she lets on to strangers that she has missed conversation, she answered: “No no I don’t because uh.. I don’t know why I don’t because well I guess cause they’re strangers…I feel it’s none of their …they don’t need to know that I’ve missed it…cause I
don’t know them anyhow (u-huh) right?” (6-4-13). Louise’s comment suggests that it is important to her to keep up appearances and not reveal her shortcomings, particularly to strangers.

The second finding in the “private vs. public” dimension is that participants regard their hearing challenges as their responsibility alone, even after spending many years struggling to hear. Here is a portion of an interview with Louise:

I: Do you agree with your daughter that you should ask D {Louise’s son} to speak out more {when talking with Louise}?
L: Well if I say D I didn’t hear you he speaks up but no I feel that this is something I’ve got I know I’ve got to have a hearing aid and get it looked after so that I don’t have to keep saying...(I see) uh I shouldn’t have to say to people speak up so I can hear them (u-huh) ummm I should look after that and have something done about it without doing that (u-huh) now maybe I look at life wrong...but uh I shouldn’t I feel I shouldn’t have to keep saying pardon me or could you..I didn’t hear you...
I: U-huh...so you feel like it’s your problem?
L: Yeah (6-4-11)

Participants perceive, like Louise, that they should neither have to “burden” friends and strangers with their hearing difficulties, nor should they expect others to participate in finding solutions. As mentioned above, disclosing that one has difficulty hearing may imply that one needs or is requesting help. As discussed previously in the section “reacting to hearing challenges”, participants express concern for how others may react to a disclosure of hearing difficulties and requests for help. Phyllis remarks that after asking three times for repetition of missed conversation: “I’ve given up y’know (u-huh) but um...and I’m sure they’re pleased that I’ve stopped asking...because it is...it is hard to keep repeating things to people when they’re deaf” (2-1-7).

Even in her most intimate of relationships, with her husband, Betty assumes the entire responsibility for solving communication problems, linking it to the fact that communication holds more importance for her than her husband:

I: Do you think that the communication problems you’ve had between the two of you (u-huh) is more your responsibility do you feel?
B: Oh he doesn’t feel responsible for anything like that you know I guess..just what I would think he uh (1 sec) I guess I suppose it is my responsibility I’m usually the one who introduces a subject and ..and ask him about something and then we get on discussing it” (7-4-9)
In summary, participants may choose to keep their hearing problems private, to themselves, to avoid being viewed as deficient or to avoid imposing their needs for hearing help upon others, or both. Even where hearing loss has been disclosed, among family members for example, participants may still see problem-solving as a private matter or their sole responsibility.

**Family Physician or Specialist**

From the many comments of the women in this study, it is evident that participants' physicians play an influential role in the disclosure and help-seeking process and thus the spiral of decision-making around hearing loss. Even though a physician's referral was not necessary to see an audiologist, each participant who felt she had a hearing problem sought out her doctor's opinion as one of her first steps in help-seeking. Four participants sought the opinion of the family doctor; one sought the opinion of an ENT whom the participant was seeing for other symptoms unrelated to presbycusis.

Comments of participants affirm that the opinions of both groups, family practitioners and specialists, are highly valued. Participants generally followed their doctors' advice in matters related to their hearing. Thus, these physicians acted as gatekeepers in the help-seeking process, effectively controlling participants' access to testing by an audiologist.

Not only did participants view their doctors' opinions on hearing as important, but some participants were under the impression that they either needed a referral from their physician in order to get their hearing tested by an audiologist, or stated that they preferred to have such a referral. When Louise, for example, was queried as to why she did not book a hearing test sooner than she did, she replied: “Well the reason I didn’t do it is because I thought uh I should be referred..from my doctor (I see) u-huh..I don’t do..anything unless uh..my doctor knows it (I see) and then I he knows what’s going on with me” (6-1-11). Even knowing that a referral was unnecessary, some participants like Betty looked to their doctor to recommend an audiologist: “I wouldn’t have known where
to go you know// if I hadn’t asked him {her doctor)” (7-4-10). At least three participants came to see the particular audiologist they did on the recommendation of their physician.

As gatekeepers to further help-seeking or action related to hearing, it is noteworthy that the doctors of the participants in the present study were reported by the participants to have generally minimized the hearing concerns they expressed by taking a wait-and-see attitude. Given the doctor’s focus on ears, it is medical symptoms that seem to concern him or her, rather than the patient’s expression of concern about her ability to hear. Phyllis’s family doctor, for example, only referred Phyllis to an ENT for symptoms of dizziness, even though she had mentioned her hearing several times:

P: I remember that I said to my doctor a couple o’times that I knew I should be seein’ getting a hearing aid and I would…think that that was probably the last couple of years (hmm) at leas’well it’s been a year since my husband died (u-huh) so I would say almost three years (u-huh) and it was last year that I really said it more emphatically I guess (2-4-8)

The overall effect on participants like Phyllis was one of delaying further action for hearing problems, in some cases for years. In no case did participants book a special appointment with a family physician to discuss their hearing concerns; they waited until their annual checkup to broach the topic of their hearing. As the above quote shows, it is noteworthy that the participant always identified herself (as patient), not the family physician or even the ENT specialist, as the one who initiated discussion about hearing.

The quote above highlights how physicians are reported to downplay the hearing concerns of patients. They may put off a referral for testing and/or attribute hearing difficulties to other causes such as stress (as with Louise) or an infection (in Frances’s case). This has the effect of delaying help-seeking action by participants, for if one observes that a doctor does not consider one’s hearing to be a concern, it seems reasonable to conclude that it must not be worthy of attention. As these women are at this time straddling the line between continuing the self-assessing process and taking a help-seeking step, one may see how they may conclude from this brief discussion with their doctor that their hearing must not be a problem, or at least not enough of a problem to warrant further action in the form of a hearing test or hearing aid. When the topic is first brought up with the doctor, they may actually be relieved to be told not to worry. It is
likely that at least another year may pass before the next check up. The topic of hearing is broached again at this visit, because the ‘non-problem’ has not gone away over the past year, but has likely worsened. Once the physician acknowledges the hearing concerns of a participant, she may take immediate action and book a hearing test, or she may continue to delay while continuing the process of self-assessment.

Betty, for example, came to be referred to an ENT for vocal weakness and nasal polyps. She initiated discussion about her hearing and the ENT did a brief hearing test in his office, suggested she may want to have her hearing tested further, and provided her with the name of the audiologist whom she eventually saw. However, she did delay booking the audiology appointment for over a year even after talking it over with the ENT, perhaps at least partly due to his apparent noncommittal attitude toward her hearing. In her words:

B: I find he’s {the ENT specialist} very good and I like him very much. But if he had said to me well it’s really important for you to go and have it {the hearing test} done I probably wouldn’t have waited so long. (7-5-6)

Similarly, Cheryl had mentioned her hearing at least once previously to her family physician, but it was only at her most recent annual check-up that he did “a watch test” (placed his watch near her ear) and referred her to the audiologist. In Cheryl’s words, “I don’t think it was that serious to him” (1-1-7).

Louise has had a very long and close relationship with her family doctor, who also cared for her husband throughout a long battle with Parkinson’s disease. She puts great stock in her doctor’s opinion. For example, when she was asked how her health was, she replied: “Well the doctor said I was in good health...so that’s all I go by” (6-1-5). She frequently comments on how “nice” and “kind” he is; however, he reportedly does not take her hearing concerns seriously when she brings up the topic:

L: I said to him I said you know doctor I think I’m deaf (1 sec) and he looked at me you know and he says uh..do you?...and I says yeah I’m having trouble listening to you {laughs} and I says my grandson I keep sayi’ he says Grandma you didn’t hear me did you? {laughs}
I: Did you tell the doctor that?
L: I told the doctor that... he laughed at me
I: He laughed at you! Did he say anything?
L: No he just laughed...you see he’s got a sense of humour...he’s real nice
{laughing}
I: U-huh...so that was the end of the conversation or did he..
L: No at the end I asked him if I he thought I should have my ears checked and
this is when he said it wouldn’t hurt...he said I don’t think you need anything but
he says I I think it would be nice for you...but I think I need a thing in my ear
{laughs} (6-1-6)

The conversation described above took place at Louise’s most recent annual
checkup about a month before my interview with her. However, it was far from the first
time that she had mentioned her concerns about her hearing to her doctor. Louise reported
that when her husband had been very ill three to four years previously, she mentioned her
hearing concerns to her doctor. On those occasions, according to Louise, he told her that
her hearing difficulty was due to stress related to caring for her husband. At her recent
annual check-up in December 1997 when she again brought up her hearing, he apparently
continued to attribute concerns to stress and “he just said he..just wait for awhile and
see...he says I’ll give you a year” (6-1-11). I asked Louise if she agreed with her doctor
that stress was the reason she was not hearing well:

L: I just I believe my doctor he thought it was stress and so I just believed that
because I I know I was ...heavy stressed out and uh.. but now that uh he said he’d
give me a year well I’ve had my year..and...so this is what he suggested {gave her
referral for audiologist} (6-2-4)

Over time, as Louise assesses her hearing difficulties, she reaches a point, like
Phyllis above, at which her own suspicions about her hearing take precedence over her
doctor’s opinion. This is reflected in Louise’s comment above: “I’ve had my year”. By the
time she is interviewed in this study, Louise’s comments speak to her perception that her
problems were not stress-related and she needs a hearing aid. In our last interview
together, I asked Louise:

I: If he {her doctor} had said...let’s leave it {the hearing test} for another year
would you have left it for another year?
L: Now Arlene I don’t know if I would have.../no I think that uh I think I’d
ha’gone and seen about it (right) if I hadn’t of asked him about it I think I’d
ha’gone on my own (6-4-14)

It is interesting to consider the language that participants quote their doctors using
when referring them to an audiologist. Cheryl, for example, said that her doctor
recommended she get her hearing tested to "relieve your mind" (1-4-13) and "just for your satisfaction" (1-1-4). See also quotation 6-1-6 above, by Louise: “I don’t think you need anything but he says I think it would be nice for you”. Recurring comments such as these seem to banish hearing as a health issue that a doctor need concern himself with, and to relegate it to a psychosomatic ailment that one can pursue on one’s own just “to make you feel better”. In summary, the attitude of physicians toward hearing difficulties in the present study, as reported by the participants, appears to be one of non-commitment. From the accounts of participants, one does not generally come away with the impression that physicians are actively involved or concerned about hearing as a health issue. This attitude may transfer to a patient and lead her to reexamine her own concern about her hearing. Perhaps, she may think, it’s not a problem after all…it’s all in my head.

To summarize, disclosing by participants to their doctors is distinguished by the following features: 1) the participants uniformly claim that it is the participant (as patient) who initiates or brings up questions regarding her hearing with her physician; 2) even after the topic of hearing is raised, participants remark on how they have to mention it again at the end of the appointment if they want the doctor to take action in some way, such as recommending an audiologist (see again quote 6-1-6 above); 3) participants do not book a special appointment with their doctor to talk about their hearing, but choose to wait until they see the doctor for another reason, usually their annual check-up; and 4) usually it requires repeated mention over several appointments, often over several years, before the disclosing leads to action by the doctor.

Conversely, the participants relate that the reaction of physicians to their disclosing is distinguished by the following: 1) physicians are perceived not to take the hearing concerns of participants seriously and to downplay or minimize these concerns; 2) they seem to the participants to take a “wait and see” attitude or they attribute hearing concerns to other causes unrelated to hearing, such as stress; that serves to delay participants from booking a hearing test; 3) for some participants, such a response by their physician is repeated for several years without action; 4) in such cases, it is the participant’s insistence on action that leads to an audiology referral; 5) even when a referral is made, the physician often continues to be noncommittal about the participant’s
hearing, distancing himself with comments to the effect that a hearing test is not necessary but only to “relieve your mind”. In fact, in one example (Betty) the ENT highly recommended the audiologist to Betty while being clear to state (“backpedal” in Betty’s words) that “he didn’t get anything out of it {meaning the referral}” (7-5-6). It is possible that the perception that hearing tests are linked to the “taint” of a hearing aid sale may contribute to physicians' distancing attitude when it comes to hearing and hearing tests.

Booking a Hearing Test

This property of help-seeking by participants refers to the specific act of arranging an appointment with an audiologist for the purpose of having a hearing test. The dimensions associated with “booking a hearing test” could also be termed “expectations for the test and its outcomes”. These four dimensions are 1) expectations of being tested; 2) seeking information; 3) gaining closure; and 4) prospect of a hearing aid. The latter three of these four dimensions emerged as reasons participants book a hearing test and thus may be regarded as expected outcomes. They will be discussed in turn after “expectations of being tested”.

Expectations of Being Tested

“Expectations of being tested” refers to how participants anticipate or conceive of how their upcoming hearing assessment might proceed. Their ideas on this topic were explored in their second interview with me held just before their audiology appointment. “Expectations of process” comprises participants’ knowledge of hearing testing and audiologists and their imaginings regarding what an audiology assessment may be like.

Participants admitted that they had little or no knowledge of what audiologists do or what their training might involve. However, the following quotation describing Cheryl’s vision of an audiology test gives us one example of what the public perception of hearing tests and audiologists may be:
C: I don’t know what audiologists do but I imagine they have the machines to do it with {both laugh}(u-huh u-huh) y’know...that’s what I’m expecting

I: Right..so if you could imagine say you were just walking in.. to the appointment right now...um what would your..what would you do what in your mind do you have as an idea of what might happen?

C: Well..I have an idea that she will probably question me a few bit..a..bit about uh...why I think I have a hearing x problem.. and..and then she’ll attach various things .. you know some earphones to my ear and and test with machines about.. the the level I can hear and probably it’s just like a...a.. electrocardiogram that will ..maybe appear on a.. screen about.. yes I hear it no I don’t hear (1-2-10)

From this one quotation (elements of which were echoed by other participants, we learn that Cheryl’s perception of audiologists and hearing tests is: 1) that their work is intimately connected to the machines with which they work (questioning the patient about their problem is a small part of what they do to start: “she will question me a few bit..a bit”; 2) these machines intervene or come between the audiologist and the patient; 3) audiologists use machines to test hearing “level”; and 4) this test is objective (“appear on a screen about..yes I hear it no I don’t hear”). The comparison of the hearing test to an electrocardiogram is interesting. Two other participants with glaucoma likened one’s mode of response in a hearing test to the “field of vision” test in glaucoma testing, where one presses a button to record a spot of light appearing at various points in one’s field of vision (4-2-5) (3-3-3).

It is a common perception among participants that the hearing test will involve listening to different sounds, variably described as “dongs” (4-2-4), “different tones...like tuning an instrument” (6-2-6), or as “noises, music and uh different things like that with different grades of sound...a high or low or whatever..pitch different pitches” (3-2-3). One participant who had not yet experienced a hearing test (but whose husband wore hearing aids) was also close to the mark in her expectations of the test environment, anticipating “isolation” in a booth (3-2-3).

When asked what her feelings were about getting her hearing tested, Louise stated: “I think it’s going to be great (u-huh) I do..uh I’m looking forward to it..because I think..this is what I need” (6-2-5). Other participants echoed Louise’s comment that they were looking forward to the test and glad to be having it. Janet viewed the process less
enthusiastically: “Oh I guess it’s just another sign of age...uh probably” (3-2-8). Marjorie was mildly apprehensive that she might get something wrong in the test, worried that: “I won’t push the button when I hear the thing or something like that {laughs}...and they think I haven’t heard it and I have {laughs} and I’m not quick enough” (4-2-4). For Marjorie it appears that the risk of being labeled more hard-of-hearing than she may be is worrisome. She was reassured, however, to know that a close friend who saw the same audiologist thought highly of her as someone who was “very good at explaining things to you” (4-2-5). Other participants echoed the importance of a word-of-mouth recommendation.

**Seeking Information**

“Seeking information” is the first of the triad of dimensions associated with participants’ reasons for booking a hearing test (or expected outcomes). “Seeking information” refers to the wish of participants to learn more about their hearing and the expectation that the hearing test they book will give them the information they seek. An interesting interaction with one participant was never captured on audiotape but is a stellar example of the dimension “seeking information”. Although Louise seemed enthusiastic about participating in this study when I explained the details over the telephone in our first contact, when I arrived at her apartment for our first interview, she greeted me in a feisty but serious mood with the following comment (which I made a research note of in my journal following the interview) before she even offered me a seat. “You’re not going to ask me a lot of questions...because I’m not going to answer a lot of questions. I don’t need questions, I need answers”.

“Seeking information” is a dimension common to all participants. Here are samples of participants’ comments about seeking information, when they were asked what they expected or would like to get from their upcoming hearing test. Some expectations are pretty general, like Marjorie’s: “I just uh want to see what my hearing is like that’s all” (4-
Some participants are more specific about the information they seek. Several participants, like Betty below, are interested to know if there is a difference between their ears (some express hope that the problem is only in one ear):

B: I’d like to know (1 sec) I don’t know the difference between both ea’ either ear I don’t know whether I hear more in one ear or the other...and uh...definitely..I I feel that I have a real hearing problem...and I’d like to know if it’s...if I have a hearing problem or whether it’s just that I’m not...listening hard enough or something I don’t know (7-2-1).

The self-assessment process that these women have gone through before help-seeking has already given them some idea of what their hearing is like. Some seek confirmation of what they already know, as Betty above and Louise: “I’d like to know if um my ears are as bad as I think they are...um..I guess that’s about all..you know..I know they’re not great...but uh..I want to know how bad they are” (6-2-6).

The comments of Cheryl, in contrast, seem to reflect the turmoil she undergoes trying to decide if her hearing is “a problem”. When asked what she would like to see ideally come out of her test, she responded: “Oh ideally I’d like to find out that I don’t have a hearing problem {both laugh}” (1-2-9). Unwilling to trust her own instinct about her hearing, or unready to admit her problems, Cheryl looks to the hearing test to provide the “truth” about her hearing. She does not seek confirmation so much as she holds out hope that the test will prove her suspicions wrong.

In our first interview, Cheryl mentioned that her doctor recommended “to go and just have a hearing test...just for my own satisfaction” (1-1-4). Although it was not clear if “just for my own satisfaction” were her words or her doctor’s, I asked at the next interview what she meant by that phrase:

C: For my own satisfaction is to uh..just to find out how much of a hearing problem that it is (u-huh) um..that’s more like it um...and if it’s a...if it’s a minor hearing problem...it’ll probably..progress into being a major one I guess I don’t know (u-huh)...um but I’d like to talk about that to (u-huh)...to the audiologist (u-huh) just to find out I don’t want to rush into anything at this stage in other words (right) (2 sec) but I’ll uh..certainly do something if it’s necessary (u-huh) ..and that’s for for my own satisfaction (1-1-9)

Frances seeks information in a very tangible form: the report:

F: I don’t know (u-huh) I don’t care (1 sec) as long as she finds out I don’t care
I: As long as she finds out...what's wrong with your ears...is that what you want to find out?
F: Yeah that's all...u-huh (1 sec) I mean she could sing she could do what she wants that's her business but...I want to see that report and see {picks up loose papers from table and shakes}...(u-huh) that's the important thing
I: U-huh...to see the report
F: Not what I think...that's not important...what she's do gonna do is important (5-1-20)

As this quotation indicates, Frances reportedly is not interested in the hearing testing process at all, just the product, the "finding out".

In summary, "seeking information" is about participants' wish to know if there is a problem with their hearing. Participants seek an objective measure to confirm or deny their own day-to-day experiences with their hearing. Some are hopeful that test results will be better than they suspect. In general, they rely on the assessment and the expertise of the audiologist to inform them and advise them about a course of action.

**Gaining Closure**

For some participants information-seeking brings with it another expectation. For some, "gaining closure" is also important. This dimension of booking a hearing test refers to participants' wish to resolve their questions about their hearing "once and for all", and their wish to put an end to the debate within their own mind or among family members as to whether their hearing is a problem, and what should be done about it if it is. As Cheryl stated: "I figure well I migh'as well have it {the hearing test} an' find out just what's going on and quit worrying about it after that" (1-1-8). Here is another example from Janet:

I: What are your feelings about getting your hearing tested next week?
J: Well I want to have it done
I: U-huh..so you’re looking forward to it?
J: Yes u-huh.. I don't know what it entails but whatever it entails I want to have it done so I can say I’ve done it and what has to be done will be done. (3-2-2)

The use of the word "done" four times in this one comment speaks to Janet's desire for closure regarding help-seeking for her hearing.
There is a sense from the following comment and others like it that the wish for closure stems in part from participants' delay in booking a hearing test. Betty, who convinced her husband to have his hearing tested at the same time, said: "We’re..glad to get them’get it done because we I’ve put it off for so long calling about it" (7-2-1). Participants undergo a long, drawn-out period of self-assessing their hearing before they are ready to book a hearing test. When they finally ‘get around to it’ (perhaps especially if there was family pressure to have it done, as for Janet above), they want it to be a one time event that they don’t have to go through again.

It is interesting to speculate about the role physicians may play in participants’ ‘get it over with’ attitude. Frances, for example, had had several conversations with her doctor over a one- to two-year period about her ears and was of the opinion that he should make an appointment for her to have them tested. I explored her reasons for having her hearing tested at this point in time (as opposed to e.g., six months ago): “Cause I asked him to make it…I I demanded {starts to laugh} (u-huh) well I didn’t demand it I just said..let’s get it over with” (5-1-17).

When I asked Janet what she was hoping to get out of the hearing test, she said: “Well I’m hoping to get a..a hearing aid or what have you and that’ll be the end of it.” (3-2-10). For some participants, like Janet, the dimension of "gaining closure" is intimately tied to the final dimension associated with booking a hearing test, "prospect of a hearing aid".

**Prospect of a Hearing Aid**

"Prospect of a hearing aid" refers to the expectation by some participants that having their hearing tested will result in their getting a hearing aid. Participants in this study who readily admitted to having significant hearing problems equated getting their hearing tested with getting a hearing aid. Perhaps the most telling indicator of the connection between the hearing test and the hearing aid in participants’ minds was the way participants such as Louise spoke interchangeably about having a hearing test and getting a hearing aid:
I: Do you think you’re getting this hearing test for yourself or is there any family member or friend that you think is.
L: No I’m wanting it for myself so I can enjoy what people are saying (6-1-18)

After a few more comments like this, I asked Louise:

I: When you first thought about getting a hearing test was that when you also first thought about getting a hearing aid do you think the two of them are sort of connected?
L: Oh yes oh yes yeah (6-2-7)

Contrast this statement with one from Marjorie, who did not perceive herself to have any hearing problem: “I really haven’t thought much about hearing aids I just thought I’d get my hearing tested” (4-2-8).

Participants generally regarded a hearing aid as the only solution to a hearing problem. When I asked Phyllis whether she thought there was anything on the market besides hearing aids that might help her hearing, she replied: “Oh I never thought about that like what?” (7-2-5). Even though participants perceived many problems with hearing aids (discussed in the next section) they also perceived that a hearing aid would somehow resolve their hearing problem (or the family stresses that ensue from the hearing problem). Thus the quotation above “hoping to get a hearing aid and that’ll be the end of it” is very revealing. In that interview with Janet I never pursued what “it” was, but “it” may mean the end of the hearing test process, the end of the search for solutions, perhaps even the end of nagging from family members to “do something”, since Janet was a participant who did not admit that her hearing was problematic.

In summary, all participants in this study had expectations of both the hearing testing process and its outcome(s). All participants booked the hearing test expecting it to provide them with information about their hearing. A subset of this group expected the hearing test to provide them with a sense of closure about their hearing. For some who expected to gain closure, the expectation that they would get a hearing aid was a significant part of that feeling of gaining closure.
"Considering a hearing aid" is the third property of help-seeking that emerged in this study. "Considering a hearing aid" has two dimensions: a) negative aspects, and b) positive expectations and hopes. This section will describe the role that perceptions about hearing aids play in the help-seeking and decision-making processes around hearing.

Negative Aspects

"Negative aspects" of hearing aids refers to negative comments by participants about hearing aids. This dimension of "considering a hearing aid" is first on the list because negative comments about hearing aids far outweighed positive comments in interviews with each participant. Often, these negative perceptions developed as a result of a participant’s interactions with, and observations of, a spouse or other relative with hearing aids. Often the relative was an older person who had had an old-style hearing aid many years ago. Comments or observations of friends or peers who have hearing aids also contributed to negative perceptions. Negative aspects of hearing aids that emerged in this study were classified into three sub-dimensions: 1) factors related to the device; 2) change and adjustment; and 3) losing control. Change and adjustment also included the sub-dimension of changing identity. Overall, the effect of these negative perceptions was observed to be one of delaying participants’ help-seeking for hearing challenges.

Factors Related to the Device

There are many factors or characteristics of hearing aids that participants perceived to be deterrents to wearing one. Participants’ comments appeared to be largely based on their personal or vicarious experience with another person’s aid and/or stories and observations regarding hearing aids owned by family members, friends and cohort members. Janet stated:

J: He {her husband} still has problems...and uh (1 sec) even with his hearing aid he has problems and it’s always the darn thing is either the {chuckling} battery is always going seems to me he’s always puttin’ in a new battery they don’t’ last any time at all..and he he just says oh I can’t hear a word you’re saying you know and
he'll take the thing out and either it's full of wax or it needs a new battery so he's constantly... aware that he's not hearing even with the hearing aid (3-1-15)

And later, when asked what she perceived the disadvantages of a hearing aid to be, from her experience seeing her husband use one, Janet said: “Oh he’s always at the bloomin’ thing it’s either plugged or there’s too much wax in it or there’s always someone needs a new battery or” (3-2-6).

Three of seven participants brought up the financial outlay as a consideration in getting a hearing aid. Participants referred to hearing aids as a “bother” or a “nuisance”. The following quotation from Cheryl exemplifies these two points:

I: In terms of your current decision not to have one {a hearing aid} were there any other factors besides the comments of your friends...
C: No...no uh well the other factor was that uh (2 sec) was my hearing aid...was my hearing that...ummm bad that I need to spend nine hundred and fifty dollars on it {laughs}
I: Hmm u-huh right...(1 sec) actually using a hearing aid wasn’t a factor?
C: Umm... I don’t think so...the fact maybe the nuisance of using a hearing aid (u-huh) which I think is...more of is just another thing you have to do like floss your teeth {laugh}(1-4-13).

And just a little later in the same turn, she continues: “and I suppose it’s just another person I’ll have to go to...if something goes wrong you know besides your dentist or your doctor” (1-4-13).

This comment actually raises two related negative points participants make about hearing aids, namely that 1) having a hearing aid will not simply be a matter of wearing it, but will involve times of frustration when it is not working adequately and needs servicing and/or repair, and 2) contending with servicing and/or repairs to a hearing aid involves time and energy to deal with it and visit another health professional in another office. For older adults with multiple health problems, this prospect may be unappealing. For one participant, such comments arose from her experience with her husband’s hearing aids and their dissatisfaction with the slow service he received in getting his aids repaired.

Time and again it appeared that participants were conducting a perceived cost vs. benefit analysis regarding hearing aids. Cheryl, for example, wrote about several problems her husband had getting hearing aids repaired and concluded: “For the above reasons, if I am offered a hearing aid for a minor hearing problem I will hesitate to agree. The hearing
problem may be less than the hassle of coping with the aforementioned problems.” (1-j-Oct 5). This journal entry illustrates that participants gauge whether the benefits of using a hearing aid would outweigh the costs associated with its use. Would they be exchanging the problems associated with their hearing challenges for the problems associated with having a hearing aid?

As Janet noted above, batteries are a concern for participants, based largely on their experience or observations of others with hearing aids. Changing batteries is perceived to be a bother, and a substantial ongoing expense. Participant Louise expected that changing batteries would involve a trip downtown to the audiologist every two weeks. Louise also had concerns about handling a hearing aid, fearing she’d lose or drop it. She also worried that squealing (feedback) like that which she noticed from a friend’s hearing aid would occur in any hearing aid she got as well.

Then there are the concerns about how hearing aids deal with background noise:

L: hopefully I won’t hear too much noise in the background with them because a lot of people say oh! I’ve gotta shut my hearing aid down because of the noise...uh I don’t want something like that I’m want I want it so I could hear not have ...noise/ ...if this (noise) is going to happen I won’t wear it...I’ll go deaf first because I can’t stand...uh trying listening...and all the mumble-jumble behind...I couldn’t take that (6-2-9)

Louise actually delayed getting the hearing aid that was recommended after her hearing test while she pursued the possibility of having ear surgery (as a result of reading an article about ear surgery). Louise was present for part of my interview with her daughter. It was held on the same day Louise told the audiologist she would not get a hearing aid until she checked out the possibility of surgery. Her daughter’s support in this quest is evident here:

I: If you could have surgery ..would you prefer that to having a hearing aid?
L: Yes I would..I don’t like anesthetic it takes me two or three days to come out of it but...might take me a month this time I’m older
D: Yeah! you never know! {all laugh}
I: But it would still be better than having to...fiddle with a hearing aid every day
L: Yeah I think it would.. (u-huh) I don’t know...I’ve never had either so I don’t know
D: Well knowing lots of people who do have hearing aids I would go for the surgery too
L: Well I know the batteries every two weeks that’s the part that (1 sec) blows you right out (6-d-7)

This quotation exemplifies the link between the dimension of change and adjustment (discussed next) and factors related to hearing aids.

For Phyllis, the potential problems related to hearing background noise when wearing a hearing aid lead her to have second thoughts about getting a hearing aid after she had her earmold impression taken, as reflected in the following comment:

P: I’m kind of uh beginning to wonder you know I hear people say ummm you know they’ve got hearing aids and they find that the background noise is worse once they get a hearing aid than it is without it...it it only stands to reason really it it’s gonna magnify the background noise the same as it magnifies the the voices isn’t it really? (2-4-1)

Last but not least, there are concerns about the cosmetic aspect of hearing aids. Four participants commented on hearing aid size as a consideration in their choice of model. Janet was most outspoken in her dislike of the appearance of hearing aids: “ugly little gadgets” was the way she put it (3-4-9). While size and appearance are “factors related to the device”, this concern really speaks to issues of identity, to be discussed under “change and adjustment”.

Change and Adjustment

“Change and adjustment” emerged as a sub-dimension of negative aspects of hearing aids in this study. This refers to the perception or belief that getting and using a hearing aid is a process that involves notable change and adjustment in the life of the new user. It may include worry or fear at the prospect of having to get used to something new. Fear at the prospect of change is compounded with fear of the unknown, since hearing aids are objects of mystery. Unlike “factors related to device” where perceptions are based on participants’ observations of, or personal experience with, hearing aids, perceptions around change and adjustment are based largely on each participant’s assessment of her abilities to effect the behavior changes needed to use a hearing aid successfully. Changes in behavior related to hearing aid use involve applying new knowledge and learning new
skills to adapt to a hearing aid. Participants’ comments revealed variable perceptions of
the degree of confidence each possesses regarding their ability to adjust and change.
Consider the following interview quotation from Phyllis:

I: Do you have any...um (1 sec) worries or apprehensions about using a hearing
aid?
P: No...not really (1 sec) no...I don’t think so (2 sec) well I suppose I must have
because I wouldn’t have put it off so long {both laugh} if I didn’t have...(u-huh)
but uh (1 sec) we’ I think I told you about...I wasn’t very good I’m not very good
at new things you know {small laugh} I think I told you how I was...had a lot...a lot
of trouble getting used to my false teeth (u-huh) but I don’t know whether a
hearing aid would be quite as bad as getting used to uh...false teeth
I: U-huh..u-huh that’s a good...good um analogy actually
P: U-huh.. (yeah)..well it’s just something different in your body that you...really
{small laugh} don’t want there I guess.. (u-huh u-huh)...however eventually you
get used to them and you don’t even know you’ve got them you know (2-2-7)

One irony of aging emerged when participants talked about “coping” with change.
On the one hand, as one ages, one is increasingly forced to deal with changing, usually
deteriorating, performance and ability on a number of fronts. On the other hand, one’s
available resources to deal with these changes may be more limited. Participants
commented on the declining ability to “persevere” or “concentrate” as one ages: “maybe
too as we get older we ...maybe we aren’t as able to uh persevere with...getting used to
them {hearing aids} I don’t know” (2-4-9).

On the other hand, Phyllis admitted that her dislike of change had been lifelong:

I: You mentioned at one point that you said you are..you find it hard to adjust to
new things
P: New things yeah
I: Do you find that you were always like that or do you feel that you’re more like
that as you get older?
P: No I was like that when I got my teeth and that would go back you know quite
a good good lot of years it must be (3 sec) thirty years when I first got my my false
teeth
I: So even when you were young
P: So even when I was young (u-huh) I didn’t (1 sec) I’m I’m sort of a person that
doesn’t like change I don’t like I didn’t I had an awful time with glasses too (2-4-
9)
This last conversation is revealing on at least two fronts. In addition to speaking to the issue of change and adjustment or adaptation by the person, this conversation talks about change to the person. There is a sense of the hearing aid replacing one’s ear or hearing, much as dentures replace teeth: an artificial thing, a prosthesis, perhaps a sensation of invasion of the body, as Phyllis stated in quotation 2-2-7 just above. As both Phyllis and Janet stated: “I can’t imagine anything stuck in my ear” (3-1-17).

**Changing identity**

There appears to be a threat to one’s identity in wearing a hearing aid. The question is: does one feel that one’s identity is threatened because one has “lost” a part of oneself (that has to be replaced) or because one’s physical appearance is altered by wearing a prosthesis, or is it a bit of both?

Phyllis speaks more than once about dentures in relation to hearing aids and the delay in taking action to get either item: “I guess you’re anxious about it.. a bit you know...oh it’s the same as going and having all your teeth pulled out {starts laughing} and dentures put in” (2-1-18). The discussion then turns to Phyllis needing a new set of dentures now and how she is delaying that: “I know I’ve got to go now and have a new set made (right)..I’m really not anxious about doing it because..you never know whether you’re {laughing} gonna look the same or not...you know..so that’s another thing I’ve got to do” (2-1-18).

It is apparent from talking with these women that they grapple with coming to terms with their hearing challenges and what it means to their sense of identity, though no one phrases it in such direct terms. But as discussed earlier, disclosing that one has problems hearing is a long process, whereby one slowly discloses, first to one’s inner circle of friends and family, then to a doctor, and so on. To consider getting a hearing aid is considered tantamount to announcing to the world that one is hard-of-hearing: One’s identity is forever and irreversibly changed. Accepting a hearing aid means psychologically accepting that one’s sense of self includes being “hard-of-hearing”. As Louise stated in
anticipation of getting a hearing aid, and in reference to friends who already had hearing aids: “I’m gonna join the clan” (6-1-14).

For some, the persistent mass culture around wearing a hearing aid is that to wear a hearing aid is to announce to the world that one is old. Phyllis’s daughter assigned this perception to her reasoning as to why her mother delayed getting a hearing aid: “Oh I think there’s sort of thing like you know you’re old when you got a {starts laughing} got a hearing aid” (2-d-6). This family member thought it significant that her mother booked a hearing test right after meeting the daughter’s friend, a middle-aged woman who had worn hearing aids for some time and who showed her the aids and recommended the audiologist with whom Phyllis subsequently booked an appointment.

Losing Control

The last sub-dimension of negative aspects of hearing aids that emerged in this study is termed “losing control”. This refers to participants’ perception or feeling that by wearing a hearing aid one loses a certain amount of one’s ability to direct one’s life, particularly in the realm of communication, but also in how one is perceived by friends, family members and peers, and society in general.

It may be daunting to wear a hearing aid. A device that exclaims to the world that you are a hard-of-hearing person threatens your control. The concept of losing control is intimately related to the concept of changing or altered identity discussed above. If one’s long-held sense of identity is threatened by hearing loss, then it is possible to see how one may perceive control to be slipping. In presenting ourselves to the world, we wish to have as much control as possible over how the world sees us. If we’re not sure who we are ourselves as our sense of identity shifts with hearing difficulties, how can we control what we present to others? This dilemma is compounded when hearing ability appears to shift from day-to-day, resulting in a loss of one’s standard of comparison even within the self, let alone interpersonally. Cheryl stated “You know I I suspect it’s not that bad… but sometimes it is and I du’ I I don’t know does it regula’does it..does your hearing go up and down?”(1-1-8)
On the other hand, the hearing aid may confer an element of being in control. Participants express concern over what they can and cannot control with a hearing aid: Can they turn the volume down when it gets too loud? Can they control the amount of background noise?

Positive Expectations and Hopes

For all the negative comments about hearing aids, participants did express expectations and hopes that a hearing aid would be helpful in addressing their hearing challenges. Cheryl spoke of a bridge friend who has a hearing aid: “She says it’s so much easier if you have it...if you do if you do have a correction made (2 sec) and and she’s x x obviously very relieved that this has been done for her...(u-huh) (1 sec) so that’s kind of promising isn’t it?” (1-2-11). As this example demonstrates, participants’ positive expectations of hearing aids were largely based on personal experience, either with a peer who had had success using hearing aids or with a spouse’s hearing aids. Even though their experience makes them aware of the challenges of using an aid, they are also aware of how difficult communication is with a spouse when he is not using his aid, as Janet indicates: “He {husband} goes around without his hearing aid on// it just infuriates me...how does he expect to hear me when he doesn’t wear his hearing aid?” (3-4-4). Thus, the benefits of a hearing aid are expected to extend beyond themselves to other family members. Cheryl went even further: “I think it would be more of a a relief to other people if I got a hearing aid than it would be to me // you know it probably be more of a nuisance to me but it would be better for other people around me (u-huh) if I had one...I’ve come to that conclusion” (1-2-3). Nevertheless, Cheryl’s comment on the positive impact her use of a hearing aid may have on others is still counterbalanced by the negative aspects hearing aids pose for her.

When asked in which situations she thought a hearing aid would be most helpful, Phyllis replied: “I’m hoping ..I won’t have to ask people to uh repeat things as all the time” (2-4-5). The hopes that participants express hinge on how hearing aids have the potential to make their lives easier or improve the quality of their lives, by making it easier
to hear family members and to hear in groups, and especially by reducing the need for repetition. It is interesting that most participants, even those who live with a spouse, do not foresee the need to use an aid at home. Louise stated: “It {the hearing aid} won’t be much good to me here alone will it...there’s nothing for me to listen for” (6-4-6). A hearing aid is seen as something that is used only when there are others around. This is interesting, considering the concerns expressed about security, and may speak to the general reluctance of participants to use a hearing aid.

To summarize the property “considering a hearing aid”, at some point in their journey of self-assessing hearing, participants perceive that the ultimate step in help-seeking for significant hearing loss is a hearing aid. At the back of their minds, if they decide they need to get help for their problem, then that help is a hearing aid. Nevertheless, this section illustrates that negative perceptions of hearing aids abound and surpass positive perceptions. These negative perceptions are linked to factors related to the hearing aid itself and to psychosocial factors, especially at the level of the person, which ultimately relate to each individual’s adaptive capabilities and efforts.

Summary

This chapter has described three of the four properties and their dimensions associated with the category help-seeking. It has been shown how participants seek help by disclosing their hearing loss to friends, cohort members, and to their physician. Disclosing may provide several forms of help (e.g., help hearing a particular conversation, gaining emotional support). We have seen the influential role that physicians play to hinder or promote a participant’s next step in help-seeking: booking a hearing test. Participants’ expectations of the process and outcomes of their first visit to the audiologist were described. For many, booking this visit was closely linked with considering a hearing aid, and the data illustrated the large number of negative and some positive perceptions participants hold regarding hearing aids. The next chapter is devoted to exploring participants’ perceptions of the experience and outcomes of the hearing test, which is the final property of help-seeking.
The focus of this chapter is the “hearing test”, which is the last property in the category “help-seeking”. The previous chapter discussed the other properties of help-seeking: disclosing, booking a hearing test, and considering a hearing aid, and their respective dimensions. Outcomes associated with these properties were explored, such as the reactions and responses of cohort members and physicians to whom participants disclose their hearing problems. We have looked at the expectations participants have of the hearing test, and their negative and positive impressions of hearing aids. In this chapter, aspects of the hearing test process itself will first be discussed, that is, participants’ perspectives on the experience of having their hearing tested and interacting with the audiologist. Next, participants’ interpretations of the results of their hearing test and the factors that contribute to their interpretations will be explored. Following this, the possible links between participants’ experiences of the hearing test and their interpretation of the results, and their course of action following the hearing test will be discussed. This chapter incorporates the perspective of the audiologist who participated in this study, as recorded in interviews held with her right after her assessment of each participant. Connections between dimensions of the hearing test and the processes of self-assessing and help-seeking will emerge, illustrating how decision-making regarding seeking help for
hearing challenges depends on the combined effects of self-assessing, help-seeking and their associated outcomes.

**Hearing Test**

"Hearing test" refers to participants’ perceptions of their first audiologic assessment. These perceptions were explored in at least two interviews held with these women after their hearing tests. The hearing test was the focus of the first “post-test” interview, held the same day as the test (usually immediately after the test; one participant was interviewed the next day). In this “post-test” interview participants were asked questions about: the hearing test procedures, the test environment, the audiologist, and the interpretation of results. These dimensions, plus a fifth: “longer-term impact”, constitute the five dimensions of the property “hearing test”. The reader is referred to Appendix J, where a full description of the test procedures and environment is provided. Appendix K provides a glossary of terms pertaining to the audiology test and the audiogram. Appendix P provides the audiologic results, including the audiogram, for each participant.

**Hearing Test Procedures**

“Hearing test procedures” refers to the procedures carried out by the audiologist in the audiologic assessment, as described in Appendix J. In this section, we explore participants’ reactions to the procedures used to test their hearing.

In general, participants were pleased with the test procedures, using words like “efficient” (1-3-5) and “thorough” (1-3-2; 6-3-8) to describe them. Cheryl commented:

C: I was quite pleased about the thoroughness of the test…cause it covers..every ..every kind of barrier (1 sec) her speaking softly…in noise…her speaking (1 sec) low…a little louder in noise and the noise diminishing and everything else so I mean she took in…quite a few things (u-huh) no I was quite pleased with the uh..the test (1-3-2)

Cheryl related the thoroughness of the test with testing that explored difficult listening environments, specifically, “barriers” such as noise. Perhaps as a result, participants like Cheryl remarked that they had to concentrate during the test: “It took a lot of
concentration ... (u-huh) you .. your .. your mind .. I mean I found ... sorta my mind started wandering a bit and I thought no you musn't do this you must concentrate because ... you're gonna miss out sounds" (1-3-2).

Most participants commented that they were a little nervous. Phyllis commented that she was surprised that she wasn't nervous and attributed this to the fact that she had had a prior test several years ago. Louise, nervous by nature, said that she was very "keyed up", as she apparently is whenever she has any kind of medical exam:

L: I think anybody having that test {the hearing test} should .. like not like me today .. go in and be relaxed and .. you know what I mean if I could have gone in and not been terrified
I: Were you feeling nervous?
L: Yeah well I was keyed up yeah
I: You were keyed up about it?
L: And uh because I didn't know what to expect but I think it's wonderful .. it's not noisy or anything (6-3-6)

The last part of her comment that "it's not noisy" implies an aversion to loud sound (see also a comment she makes below about the audiologist being quiet) or an apprehension that loud signals are necessary to test hearing. Louise's high anxiety level may have contributed to the worry and confusion she apparently felt during the test:

L: I didn't know if I should answer yes or no or what I should do {during word recognition testing} and it confused me ... I could hear her (u-huh) but I didn't know what I was supposed to really do I was afraid to .. in case I spoke too loud I'd take her ears off or something this was what was worrying me (6-3-3)

I asked participants whether they were surprised by any of the test procedures. They replied that, since they really didn't know what to expect (apart from tones or beeps of some kind), nothing was too surprising. Cheryl stated that the bone conduction testing was a surprise. She also thought that the "noise background" and "the reading of the words" (1-3-1) were surprises, but she felt that both were good test material. These comments are interesting because they imply that participants anticipated that the stimuli used in the hearing test would be completely unrelated to "real world" auditory stimuli, such as words and noise.
Test Environment

The “test environment” refers to the physical surroundings in which the testing occurred, including the spatial layout of the sound-attenuating booth and how the audiologist and participant were situated relative to each other. It is interesting to note that, for participants who had had a prior hearing test, such as a short test at an ENT’s office, the most vividly described aspect of the test was the spatial layout of the environment. Cheryl remarked that being able to see the audiologist through the window of the sound booth helped:

C: I could see her sort of the shadow of her we’it seemed to make it a bit easier for some reason or other (u-huh) you’d be interested in knowing that (u-huh) for the environment of something like that to know that that person I mean you could hear’always hear a voice but you can see the person..uh vaguely (1-3-3)

Perhaps a view of the audiologist helped Cheryl because, when asked about the test environment, she replied that she felt a little claustrophobic in the test booth: “Well I li’ I’m a little claustrophobic I guess I get a little bit uh...but you have to have a small room to get the...complete uh...sound uh changes too don’t you?”(1-3-3). The latter part of the above quotation reflects an interesting perspective on why audiologists test in small rooms! In general, the small test environment seemed to match participants’ expectations.

Unlike Cheryl, Louise wondered whether she should be watching the audiologist:

I: You could see her.. (u-huh) did that help?...at all to <be able to see her?>
L: <Well I didn’t> know if I should watch her or not so I thought well if I take my eyes from her maybe and concentrate on what she’s saying maybe I’ll know what she’s talking about you see (6-3-3)

The fact that participants brought up talk about seeing the audiologist speaks to their desire for rapport with the audiologist and the importance of vision to supplement auditory cues and hence maximize performance, especially in a test environment. As already quoted, Louise was afraid of speaking too loudly to the audiologist during testing. I explored with her why she felt that way. She was unsure in her response, but she did state that she thought “it was a very quiet...test” (6-3-2). This may reflect the sensation of being in the sound-attenuating booth. Alternatively it may reflect how softly she was hearing the test signals due to her hearing loss, leading her to believe that her own
responses should be as quiet as those she heard. This impression may have resulted as well from the calm manner in which the audiologist spoke: “Maybe her tone...uh she didn’t she wasn’t...boisterous in any way she was very very nice” (6-3-2). This comment equates a calm and quiet disposition with good character and relates to the above comments about Louise’s potential aversion to loud sound.

Relating to the Audiologist

Participants were generally very pleased with the quality of the testing and the service provided by the audiologist:

M: she’s very good at you know explaining things and things like so..which is a big help I think
I: U-huh u-huh..so you found her instructions clear
M: Oh yes (u-huh) yes...yes I liked her very much I thought she made things seem very easy (4-3-2)

Marjorie’s comment indicates that clear instructions to explain test materials and to simplify and facilitate test tasks contributes to satisfaction with service. Betty also expressed satisfaction with how the test was conducted: “I think we {husband and B} were both quite satisfied with the results you know with what she did” (7-5-1). However, she raises a good point a few minutes later, in stating that a first-time service may be difficult to evaluate:

I: Were you satisfied with the service from A {the audiologist}?
B: Oh yes very u-huh
I: Was there anything that you thought she should have done that she didn’t?
B: I don’t think so...we {husband and B} wouldn’t know (7-5-1)

Participants had faith and trust in the audiologist as the specialist with expertise to advise them about their hearing, as illustrated by Marjorie: “I feel she’s a very capable person and you know if she said you need one {a hearing aid} you’d..you’d need one {chuckle}” (4-4-6). Marjorie, as it turns out, didn’t need an aid. Others, however, who appeared to be struggling to come to terms with their hearing, sometimes questioned the audiologist’s advice or motives. Cheryl, for example, had many positive things to say about the audiologist but she appeared to be looking to her for approval. It seemed that
Cheryl hoped that the audiologist would grant her permission to abandon help-seeking. When this was not forthcoming she chose to cast doubt on the audiologist’s advice rather than on her own hearing:

C: well of course I was hoping that she was going to say oh well you do have a hearing problem but it isn’t uh (1 sec) it isn’t going to ‘if it isn’t bothering you we’ not to worry about it but uh I just asked her well would my life be a little easier …on me…in my lifestyle be a little easier and of course I suppose she would answer yes anyway wouldn’t she…I mean she’s {chuckles} she’s an audiologist {I laughs} she’s not going to say oh no you’re {end of comment}(1-3-2)

This comment also raises questions about participants’ perceptions of audiologists, possibly implying a view of audiologists as hearing aid sales people, whose motivation to make a sale may influence how they counsel patients. It is reminiscent of the comment (in Chapter 5) by Betty regarding her physician’s lack of vested interest in making a recommendation: “he didn’t get anything out of it {the audiology referral}” (7-5-6). Such comments, made both by other health professionals and the public, imply a one-dimensional view of audiologists and audiology as a field focused only on hearing aids.

On the other hand, participants like Betty, who were more predisposed to accept a hearing aid recommendation, expected the audiologist to take more of a lead in initiating steps toward a hearing fitting:

B: I was surprised I thought that she would uh offer us {B and her husband} a hearing aid for a month or something to try…(u-huh) I had a notion that she did that with some people but maybe if your hearing was really bad she would offer you one for a month I don’t know and then you bring it back and decide whether you’re going to buy it or not
I: yeah no I think that’s a standard standard procedure..she may not have explained that
B: She didn’t we didn’t talk about price or anything you know but she said just go home and think about it..we just have to…
I: So did you find that you had some questions like that
B: Well that was the only thing that I was wondering about
I: I see right..do you think ..so if she had brought up the possibility of a trial you might have made a decision today to try one out?
B: I might have yes.. yeah (7-3-6)

Based on the participant’s own perceived need for an aid, the audiologist’s recommendation to consider an aid, and the participant’s knowledge of a friend who had had a hearing aid trial, Betty expected to receive more information about hearing aids at
her appointment. The impact of this on her future action will be discussed later in this chapter, in the section describing the dimension “longer term impact”.

Participants were very conscious that the audiologist had a limited amount of time to spend with them. Cheryl is one participant who still had questions at the end of her appointment, but “I knew that my appointment was up and I didn’t wanta...want to hold her up too much” (1-3-5). Similarly, Phyllis had an unanswered question:

P: I meant to ask her if it was {better to start with one hearing aid or two} I didn’t want to take any more time because I thought...was she a long time with me or?
I: I think that’s standard
P: And I knew the girl {receptionist} had come to...there must have been people out there {in the waiting room} (2-3-3)

Janet expressed dissatisfaction that more time was not spent with her:

J: I just thought she was in..there might have been more to say..but I got this ..a real impression that she was anxious to go
I: u-huh..so then you felt like you did you have questions..that you?
J: well I don’t remember that I did I don’t think..I don’t know..it was all done very (1 sec) very hastily actually (3-5-10)

It is interesting that complaints from participants like Janet did not surface in the immediate ‘post-test’ interview but seeped out in later interviews. Janet proffered the quotation above during the last moments of my last interview with her, three weeks after her test.1 Over time, as participants mulled over the test experience and absorbed their test results, a few voiced points of dissatisfaction, particularly participants whose test results did not meet their expectations. The starkest example of this was Frances. Frances was unable to meet with me immediately after her test, but I had time to ask her outside the office as she left how she felt about it. She said that she was happy and satisfied. In our interview the very next day, however, she gave quite a different story. Frances complained about the test procedures and instructions, for example, about the word recognition test: “It was like repeat after me and then she gave me a word (right)...well..I could hear the

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1 It is interesting that, in reviewing my research notes, I discovered that Janet’s appointment was the only one of the seven that started late, so her dissatisfaction with the time spent may actually relate to annoyance that she was kept waiting, or the wait may have actually shortened the available appointment time.
repeat after me but then I didn’t hear the word...correctly (u-huh)...if she just gave me the word itself...I would have heard it...correctly” (5-3-2). She continues for a minute or two on this issue, injecting a suspicion of conspiracy:

F: but if she just give me the word...that would have been easier
I: You think that would be easier
F: Yes..much easier..yeah...cause I would wait for the word..what I was waiting for was {laugh} re...just say the word...and then she’d give it...by that time
{laughs}
I: Yeah the reason they do that is>
F: <To mix you up a bit>
I: No no..it’s not a trick..it’s..’say the word’ prepares you ..for the>
F: <It didn’t (5-3-2>

She doesn’t stop there, however. She goes on to say that maybe some people need to be constantly told to repeat the word, but not her:

I: ..so you think that was a factor in...(well) in how well you did
F: Well..it threw me uh it didn’t throw me I was I was gettin’ bored with I thought to myself uh..you know..repeat after me you know this (5-3-3)

Throughout my interviews with Frances she displayed a tendency to criticize others, so it was not surprising that she found fault with aspects of the audiology test. However, it was evident that many of her comments were an attempt to discredit the audiologist rather than admit she had difficulty hearing during the test. Frances appeared to display a need to redeem her performance in the test, and to show that she was still in control, that nothing throws her. These comments are consistent with other comments she made throughout the study that expressed her desire to stay on top of things or to be in control.

In summary, despite criticisms by a few of the women, participants generally stated that they were satisfied with the audiologist and how test procedures were carried out. The audiologist was viewed as trustworthy and knowledgeable. Some participants had hoped for more time with her, or more information about their hearing or hearing aids. Some expected the audiologist to take more initiative in the decision-making process around a hearing aid. A few complaints emerged in later interviews toward the end of the study, as women reflected upon and gained distance from the test and its outcomes. Complaints or questions about the audiologist also tended to come from participants
whose test results showed greater impairment or disability than they hoped or expected, or from participants who seemed to be continuing to work through their interpretation of the test results (as will be discussed in the next section). This suggests the extent to which an audiologic assessment is a process that lasts longer than the duration of the appointment per se. The experience, the interactive effects (among participant, audiologist, test procedures, and environment), and the results (including the novelty and the speed at which information is relayed), cannot be immediately absorbed and take some time to be synthesized. We will pick up this thread later in this chapter and the next.

Interpreting Results

"Interpreting results" refers to the meaning or understanding of hearing test results that participants take away with them from their first audiology appointment. The data in this study identified several factors that may influence how participants interpret their test results and how they make decisions regarding future action for their hearing on the basis of these interpretations. Figure 8.1 presents a model of how these factors may interact by looking at the interface between the audiologist, the audiologic assessment (hearing test), and the participant as patient.

The Audiologist’s Perspective: What the audiologist brings to her counselling session with the participant, the patient, has an important influence on a participant’s interpretation of test results. Therefore, let’s first look at the hearing test from the audiologist’s perspective, which is represented in the top box of Figure 8.1. This box, and the following description, is developed from my observations of the audiologic assessments in this study, and from my analysis of comments by the audiologist in my interviews with her after she tested each participant.2 The “client intake form” (Appendix H) and a brief chat with the patient3 before testing provides the audiologist with a

2 In my view, the audiologist in this study was representative of the profession in her approach to testing and counselling.
3 Since the audiologist’s perspective is presented here, the word “patient” will be used instead of “participant”.
Figure 8.1
Factors that Influence Interaction Between Patient and Audiologist in Audiologic Counselling

Note: "rec." = recommendations
“snapshot” of the patient. The audiologist is most concerned with finding answers to the following questions: Are there any general or ear-specific medical symptoms to consider? How much hearing problem does the patient describe? What/who has motivated her to have this test? Does she appear motivated to try a hearing aid? Answers to these questions may direct the audiologist’s choice of test procedures (as indicated by the dotted arrow from “snapshot of P” to “procedures” in Figure 8.1). The bulk of the hour-long appointment is then devoted to specific tests to determine the patient’s degree and type of hearing loss, her word recognition abilities (in normal and amplified conditions, in noise), and, based on results from the above tests, her candidacy for a hearing aid. The audiologic assessment, therefore, is directed at measuring the patient’s hearing impairment and, to a small extent, disability, in World Health Organization (1980) terms. The hearing test served two additional roles for the audiologist in the present study. First, she wished to provide patients who had hearing loss the opportunity to see how their hearing differed from that of normal-hearing persons. Here is an excerpt from my interview with the audiologist after she tested Cheryl:

A: one of the things I try to do in my testing is to show a contrast like to draw attention to the fact that you know at a plus ten signal to noise ratio 40 dB where somebody’s usually scoring 90% you scored 20 20% (1-audiologist-3)

Second, the audiologist tries to demonstrate to patients who are candidates for a hearing aid the value of an amplified signal in improving speech understanding. Here the audiologist describes to me how she tries, unsuccessfully, to convince Frances:

A: one of the things I try to do in my testing is demonstrate to the person some recognizable value so that even as I was talking to her...through the headphones and I spoke to her at 40 in quiet and she acknowledged oh there’s no prob’ again in quiet there was no difficulty...what I was hoping for if she would have bitten...meaning that she would have recognized yes I feel that I should do something and try a hearing aid was that when I was actually speaking to her with the noise in the background that she would have gone aha! oh yes that’s much better when you bring it up...and I didn’t get that sense...from her (5-audiologist-2)

In anticipating how she will counsel the patient, the audiologist considers the patient’s

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4 For example, tests of middle ear function may be conducted if the patient’s history or comments suggest a problem with the middle ear.
reactions to testing such as those described above (this is indicated in Figure 8.1 by the dotted arrow from "procedures" to "counselling results and recommendations"), and integrates her interpretation of the test results with her 'snapshot' view of the patient. In some cases, most notably with Frances and Betty in this study, the audiologist tempered her recommendation of a hearing aid, even though she clearly thought an aid would be beneficial. The following two excerpts illustrate this, the first from my interview with the audiologist after testing Frances:

A: Counselling-wise certainly she’s aidable and I think I think she’s a woman who needs amplification and I say that in combination with the fact that at 2000 {Hz} her thresholds are down at forty-five and they go across and also it certainly showed up in her word recognition scores in noise where she was only scoring 20%...and went from 20 to 85% with the amplification which is a good prognostic that amplification could be beneficial for her...and yet my sense is that she’s the kind of person that it may take another year or two or three before she feels motivated...

I: So when did you know that...before you started testing her did you sense that even if she was a candidate that she would take some time to warm up to the idea or did you slowly come to that realization
A: No no I think it was quite apparent even in that initial interview of her description of why she was even there (5-audiologist-1)

In the counselling session with Frances, the audiologist explained Frances’ audiogram to her and how her results differed from normal (e.g., gave examples of her wrong answers from word recognition testing and explained how her score of 20% compared to what normal-hearing persons would score), and then said:

A: now you can tell me if I’m wrong...my sense from our conversation is that I don’t know that you feel...sufficiently...bothered to want to look at getting a hearing aid at this point {F sighs}...I don’t know ...that was my su’that was my reading I’m not sure

F: Not uh not really...I uh..but I did want to know how far (u-huh) and I thought well if it goes any further then I know what to do (5-audio-12)

The audiologist sensed even in her first minutes with Frances that she was not at the assessment to find solutions to her hearing problem, but rather that she was on a mission to gather information about her hearing (the audiologist mentioned this perception to Frances in counselling and to me after her assessment). In her choice and administration of test procedures with Frances, the audiologist enacted her agenda (as she described above)
of creating situations where she could highlight how an amplified signal was helpful, in an attempt to convince Frances during testing of the potential benefit that could be derived from wearing a hearing aid, and to gauge Frances’s readiness to try one. When these attempts were unsuccessful, the audiologist did not spend further time in the counselling session trying to convince Frances that she was “aidable”. As she stated to Frances in counselling: “The biggest thing is that…you have to be motivated to want to (to go that) do that {get hearing aids}” (5-audio-13). The audiologist’s response demonstrates her appreciation of the process of self-assessing in which Frances is engaged and the importance of Frances controlling and directing that process, in part because of the crucial role that self-motivation plays in successful problem-solving for hearing loss.

In summary, what the audiologist chooses to relay in counselling is based on her interpretation of the results of the procedures chosen by her in testing, combined with her perception of the patient’s view of her hearing, the patient’s openness to accept the test results and the patient’s motivation to solve her hearing problems (especially vis-à-vis a hearing aid).

The Participant’s Perspective: From the participant’s perspective, the counselling session represents the climax of her hearing test appointment. Here the audiologist informs her of how she did in the test and what she recommends regarding her hearing. The lower box in Figure 8.1 represents the interplay among factors evident in the present study that influence the participant as she considers the test results relayed by the audiologist. These factors determine the degree of “match” between what the audiologist says and what the participant hears in counselling (the dotted line between the two boxes). These factors are: 1) the participant’s “real-life” experiences with her hearing (refer again to Figure 6.1 in the discussion of self-assessing), 2) her experience during the test itself (how well or poorly she felt she was hearing as the test proceeded), 3) her expectations of the hearing test (as discussed in Chapter 7 on help-seeking), and 4) other influences, such as relationships with family members. These are discussed in turn below.

The participant’s “real-life” experiences with her hearing: One finding that emerged from the data is that several participants’ understanding of their test results differed significantly from my interpretation (as participant observer and audiologist) and,
presumably, the interpretation of the audiologist who relayed the test results. In other words, there appeared to be a mismatch between the information the audiologist intended to relay and what participants understood. A discussion of the results and their interpretation for three participants will best highlight this point. For the following discussion, please refer again to Appendix Q, in which the audiology test results for each participant are provided.

Recall that Janet sought a hearing test at the prompting of family members. She did not perceive herself to have much of a hearing problem. In the post-test counselling session, the audiologist, after briefly describing Janet’s audiogram, explained her word recognition scores in noise:

A: the encouraging thing was that when I was doing the clarity test with you you know say the word cat (u-huh) say the word calf that...when I amplified and gave you a little bit more...your scores improved significantly (u-huh) so for example..where your accuracy.. was only forty-five percent in ..in yo in your left ear where again people with good hearing would score ninety (yeah) ninety percent..the encouraging thing was that when I boosted it a little bit louder..it went from forty-five to sixty..it was like oh that’s better! (yeah) that’s eas’ now I don’t have to strain..and in your right ear..which again is the weaker..it was..fifteen percent (yeah)..and but it did improve to forty percent when I made it a little bit...a little bit (louder) louder (3-audio-5,6)

Later in the same session, the audiologist talks about which ear would be the better one to fit with a hearing aid and again she refers to these scores: “In your case there was quite a distinctive difference I think you scored sixty percent accuracy in the ..the one ear as compared to forty percent (u-huh) accuracy in the other” (3-audio-7).

Immediately following the test session, I interviewed Janet over coffee to get her impressions of the test. She was visibly and audibly subdued compared to her usual effervescent presentation. This is the beginning of that interview:

I: Ok so I just wanted to get your impression of the test results first..what you learned about your hearing today
J: Oh I didn’t know it was as bad as it is (1 sec) I’m surprised it’s as bad as it is (u-huh) when it doesn’t you know it hasn’t bothered me that much so (1 sec)
I: U-huh..what makes you..um..what is it that A said or that she showed you that makes you (well) say it’s bad
J: Well uh (1 sec) sixty and forty percent aren’t very good
I: The understanding (yeah) speech (u-huh) understanding
J: U-huh u-huh (u-huh) so that was disappointing I thought my left ear was better than that
I: U-huh..your left ear
J: U-huh
I: Do you think you’re understanding more than sixty percent?
J: Yeah I think so..(yeah) u-huh..I do (3-3-1)

This comment links Janet’s surprise and disappointment with her test results to the percentages discussed by the audiologist in counselling. It is interesting to note that Janet focuses on “sixty and forty percent” with no evidence that she understands the referents for these percentages. It is also interesting that the percentages she remembers and attempts to relate to her day-to-day, unaided experience are the amplified percentages the audiologist repeated (see quotation above by audiologist): the scores she could expect to obtain with a hearing aid. Janet’s comments in subsequent interviews continue to focus on these percentages. Given time to reflect further on her hearing test, however, Janet starts to rationalize and put her own spin on these scores. Here is an exchange where Janet considers the audiologist’s recommendation of a hearing aid:

J: Yeah I think the better ear makes sense {for a hearing aid fitting} (1 sec) doesn’t it? (u-huh) I may as well have..better hearing in that ear and then I can hear all aroun’ but what what I suddenly it occurred to me sixty and forty makes a hundred that’s not bad!
I: {laughing} Especially Ustening with two ears
J: Yeah {laughing} a hundred percent between two ears isn’t that bad (3-4-6)

In our final interview together this issue was revisited when Janet raised the point that she wished the audiologist had spent more time discussing her percentage scores:

I: What would she what would you have expected her to talk about more?
J: Oh uh the be’ the sixty forty business
I: U-huh now tell me again what your interpretation of the sixty forty is?
J: Well..I’ve got the sixty in one ear and forty in the other that’s sixty percent..of hearing..and forty percent is way down in this ear
I: So you think it refers to the amount of hearing left
J: The amount of hearing
I: Amount of hearing left in each ear (yeah u-huh) I see (u-huh) ok
J: That’s not much (u-huh u-huh) put them together and it’s not bad
I: Right
J: No I thought she could have explained that a little bit more (1 sec) u-huh..maybe it’s not necessary at all…was self explanatory I guess (1 sec)
I: Now how did she come up with those numbers again?
J: She did
I: Yeah how did she
J: Well by the chart (right) on the chart {referring to audiogram} (3-5-11)

Although participants may express very different perceptions of their hearing and their hearing problems, they may nevertheless interpret the test results similarly. In counselling Louise, the audiologist did not describe the audiogram but rather focused on explaining her scores in word recognition testing. Here are Louise’s first comments to me after her test:

L: I hadn’t realized I was so.. so hard-of-hearing so deaf (hmm) until today
I: U-huh so um can you tell me what the test results show in your own words? ...about your ears?
L: What do you mean dear?
I: What what from the test today what did you find out about your ears?
L: Well I know I have twenty five percent... now I didn’t ask.. I guess I’ve only got twenty five percent hearing in one ear and eighty five percent* in the other (I sec) I think that’s the way it went..(u-huh) and I was saying the wrong words because I couldn’t ..you know with the noise in the background I didn’t pick them up at all (right) ..so I’ve realized now that I I I am ... deaf {pitch rises}(6-3-1)

In their interpretation of the test findings, Janet and Louise were similar in several respects. Both of them focused on one piece of information from the post-test counselling session: their percentage score on the test of word recognition in noise. This in itself is not so surprising, given that the audiologist spent much of the short time in counselling discussing the word recognition scores. Both Janet and Louise then made the same leap to interpret their scores as reflecting the percentage of hearing they had in each ear. Both persisted in their focus on these percentages weeks after their test. Finally, perhaps as a result of their misinterpretation, Janet and Louise came away from the test with the impression that their hearing was much worse than they thought it was before the test.

Participants take their interpretation of test results and compare them with their day-to-day experience of hearing. As quotation (3-3-1) above and the quotation below indicate, Janet has trouble relating the test results, as she interprets them, to her “real-life” experience:

I: so would you say the test confirmed what you thought about your ears or?
J: No it doesn’t (no) cause I don’t think I was’I didn’t think I was that bad...(right)... I thought I had a slight hearing problem...I didn’t know I had a bad hearing problem..and I still don’t think I have a bad hearing problem (3-4-2)

Thus, Janet continues to focus on the percentage scores, but because they are incompatible with her “real life” experience, she starts to question their validity. When asked to explain what the audiologist said about her hearing, Cheryl also focuses on percentage scores, but admits she is confused about their meaning: “Well.. she said the twenty fi’.I think it was um..twenty five percent..for my left ear and then it was thirty five percent I saw some figures there (u-huh) and worked up to seventy five percent with both ears I think (2 sec) I dunno maybe she’ll let you see that I can I (yeah) I’m a little confused” (1-3-1). In our next interview eight days later, Cheryl said:

C: I went and got a copy of this {referring to her test results} (oh yeah) but I can’t understand it..(right) except that..um I’m just wondering whether this score when it says 20 % does that mean 20 % loss...or 20%...hearing?
I: It’s a score out of a hundred that you got on a list of words I think
C: But tha’is that I know it’s a score out of a hundred except (u-huh)..does it mean..I have a 20% loss or does it mean..I have 20% hearing? (1-4-1)

These comments reveal Cheryl’s confusion as she tries to decipher her test results. “Confused” was a word that participants used to describe their feelings after the hearing test, as they tried to reconcile their interpretation of the results with their own perceptions of their hearing (e.g., Louise: “..now I’m all confused” 6-3-1). Such confusion has implications for one’s course of action following the test, as will be discussed in the next section.

Cheryl’s comments above also highlight the importance participants attach to seeing results on paper, a sense that “seeing is believing”. Cheryl, as she mentioned above, actually made a special trip back to the audiologist’s office to pick up a copy of her test results, thinking that by seeing the results on paper (and perhaps discussing them with her husband) some of her confusion would be resolved.

The Participant’s Experience During the Test: Some participants felt that they were doing quite well as the test proceeded (“experience during test” in Fig. 8.1). Seeing their results on paper was a shock to them, as demonstrated in this quotation from Janet: “During the test...I thought I was doing alright (right) it was afterwards..(right) when I
saw that chart and I couldn’t believe it..(right) that it was that bad” (3-4-2). Louise also
was surprised:

L: ...she told me she said one word and I said something else...
I: ...did you notice it at that time before she mentioned it did you think you were
having as much difficulty?
L: Well I I knew I was having a little trouble but I thought...no that’s what she
must have said
I: U-huh u-huh (you know).you were pretty certain when you said the word {in
speech testing} that it was the right word>
L: Yes..yes...and then when I see it on paper in black and white it really throws
ya..(6-3-2)

The participant’s expectations of the test: The next factor, ‘expectations of test’, is
tied to the factor ‘real-life’ (self-assessing) experience, and may also influence participants’
interpretations of test results. Recall from the discussion of help-seeking in Chapter 7 that
all participants booked the hearing test expecting to receive information about their
hearing so that they could confirm or deny their day-to-day self-assessing experience.
Some also expected the hearing test to provide a sense of closure with regard to taking
action for their hearing problem or regarding their attempts to understand their hearing;
part of the sense of closure for some involved realizing their expectations with respect to a
hearing aid. As described above, several participants struggled to interpret the information
they received from their hearing tests and to relate it to their own experience. Moreover,
their confusion did not promote a sense of closure. The link between test expectations and
test interpretation and the impact of this link on future action by participants will be
explored further in the next section.

Other influences: The final factor to consider (“other influences” in Fig. 8.1) is
how a participant’s interpretation of her test results may be influenced by others who are
present during the counselling session. Betty, for example, was strongly influenced by her
husband. Recall that both Betty and her husband G had their hearing tested the same
morning. G was tested first and his results showed a significant drop in hearing in only one
ear. Betty did not sit in on the audiologist’s counselling session with G, but G sat in on her
The following interview excerpt, recorded ten days after the hearing test, reveals that confusion about the results was rooted in the difference between Betty and her husband’s audiograms:

I: Ok so what sort of things have you been thinking about since your hearing test?
B: Well we had a dispute when we came home because G {her husband} I wanted to ask you about it- because G says that she said there was no trouble with my hearing (hmm) cause he was there when she was talking to us you know about and there was a difference of about like that in the ... left side of the paper where she was and I thought she said that I had more ..of if we were getting hearing aids I should get one first..cause she figures G should have this ear investigated so I don’t know whether uh I’m all mixed up now as to what she did say to me so could you clarify it?
I: Maybe after we’re finished (alright) I’ll go over umm umm is there a now are you confused also about whether she said you should get it first or not?
B: Well I thought that’s what she said
I: Well what did G think?
B: He didn’t know he wasn’t he wasn’t concerned about it whether I did or not... he said that there was no difference in my two ears.. I heard fine..(u-huh u-huh) but I don’t hear fine I know I don’t hear fine (7-4-1)

Betty’s confusion and uncertainty persisted to my last interview with her five weeks after her hearing was tested. How exactly her husband influenced her future course of action regarding her hearing will be explored further below.

In summary, participants’ prior experiences with their hearing and their experience during the test itself may have contributed to their interpretation of the hearing test results. The role of test expectations and other influences were touched upon, and these will be explored further in the next section on longer-term impact. The role of the audiologist in participants’ interpretation of the test results was discussed, and the example of the focus on word recognition scores in counselling underscores the importance of the audiologist’s role in directing the counselling session. It was shown how the audiologist may choose to highlight a patient’s speech recognition scores in counselling as a way to contrast the patient’s hearing disability with “normal” results, and in an attempt to convince the patient

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5 It is not clear whether Betty was not invited to sit in because G preferred her not to be there, or whether the audiologist just wasn’t aware when testing G that G’s wife Betty was there at the same time for a test.
of the benefits of amplification. However, this good intention has the potential to backfire when the patient misinterprets the information in such a distorted fashion that she ends up rejecting the information (and underlying advice) because it is irreconcilable with her own experience.  

One question that arises from this discussion is: To what extent does the experience and interpretation of the hearing test, as influenced by the factors described above, determine the longer term impact and future course of action participants take with regard to their hearing? The next section explores this question by looking at the course of action participants took with regard to their hearing between the time of the hearing test up until the end of this study.

**Longer-term Impact**

"Longer-term impact" refers to how the hearing test and participants' interpretation of test results influenced them in the first weeks after their test (up to the end of the study), and how those influences may have affected participants' choices in terms of taking further action concerning their hearing problems.

Marjorie and Phyllis represent the most "straightforward" examples in this study in terms of their course of action following their hearing test. For Marjorie and Phyllis, there was a good match between what the audiologist said in the counselling session, their interpretation of test results, their test expectations, and their "real life" experience of their hearing. Both of them felt good about their test results, continued to be satisfied with the test and the audiologist in later interviews, and did not exhibit the confusion and misunderstanding that was evident with other participants. In Marjorie's case, neither she nor the audiologist felt that her test results or her minimal degree of hearing difficulty called for a hearing aid. In fact, testing revealed an unexpected culprit: impacted wax in one ear, which was likely responsible for slightly reducing Marjorie's hearing performance.

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6 It is noteworthy that Phyllis and Marjorie (discussed in the next section) came away from the hearing test with the clearest understanding of their results, and in these two cases the audiologist made no mention of their speech recognition scores in the counselling session, possibly because she did not feel it was necessary to "convince" them of the need for a hearing aid.
Marjorie represents one end of the self-assessing continuum in that her perception of her hearing (degree of handicap) matched her impairment. Moreover, both were minimal, and her case was simple in that no action beyond removing the earwax was indicated.

Marjorie commented before her test that this test was her first and “I hope my last maybe” (4-1-9); however, her remarks after her test suggested that she would return for another test in a year, as the audiologist suggested, because she agreed that it was a good idea to monitor her hearing (4-3-1; 4-4-4). A recurring comment of Marjorie’s in our interviews, both before and after her test, had been that hearing loss may come on so gradually that it may not be noticed: “Things can happen like wax in the ear and you don’t even know about it” (4-4-7; 4-1-7; 4-2-7). She also admitted after her test that “I’ve guess I haven’t been noticing things.. cause obviously my hearing isn’t quite as good as it used to be (u-huh u-huh) from the test and having the wax in it I guess” (4-4-10). In terms of the longer term impact Marjorie’s first hearing test may have upon her, the above comments suggest that perhaps it gave her a better awareness of her own hearing and helped to establish rapport with the audiologist, which may make it easier for her to book a test in the future. In Marjorie’s words, referring to the audiologist (4-4-4): “It’s nice to get to know someone before you badly need them”.

Phyllis, in a sense, represented the other end of the self-assessing continuum. The only participant to have had a prior audiologic assessment (in 1990), she acknowledged that she had had a hearing problem for at least ten years (the longest time reported by any of the participants). Like Marjorie, her test results matched her own perception of her hearing (impairment and handicap). She went into the test expecting to get a hearing aid (in fact, she had expected that a hearing aid would be recommended after her first assessment in 1990). She was ready to try one, buoyed by the positive role model her daughter’s hard-of-hearing friend (other influence) had provided. The hearing test confirmed her self-assessment and her expectations of the test and served to bring the reality home that she was now going to try an aid. One more aspect (other influence) may have facilitated Phyllis’s move toward getting a hearing aid. The ENT who had tested her the year previously had told her she would probably need two hearing aids. Perhaps “psyched” to expect the audiologist to recommend two aids, Phyllis expressed relief that
only one aid was advised at this time: “The doctor told me that I would...he thought I
needed two {aids}// but I do feel better to just get one” (2-3-3). Perhaps this made it
easier for Phyllis to proceed with the fitting.

Other participants are more complicated than Marjorie and Phyllis in their
understanding of their test results and their course of future action. The previous section
described factors that influence participants’ interpretation of test results (refer again to
Figure 8.1). The data for Marjorie and Phyllis reveal congruence among these factors. The
data for other participants reveal incongruence among these factors. Let’s pick up the
discussion of Betty from the last chapter to see how such incongruence affects her future
action.

In the last section, we saw how Betty’s husband influenced her interpretation of
her test results. He also influenced Betty’s course of action after her hearing test. In my
interview with her right after her test, when I asked her how she felt about her test results,
her first comment reflected her wish to try a hearing aid. However, as the following
excerpts show, she sought out and seemed to defer to her husband’s strong opinions about
her hearing and hearing aids. It was clear that any decision regarding future action would
not be hers to make alone:

I: Ok ok um so how how are you feeling about the test results?
B: (2 sec) Well I went I still will find the same thing when I get into a crowd that
there will be that I won’t hear people speaking as well as I do now and I think that
I would be happier if I got a hearing aid in my right ear
I: U-huh..so you think that you will go ahead and >
B: <well we’ll talk about it we don’t know yet what we’re going to do she said to
wait awhile and think about it so... but as she says it’s not going to get better so
and I think the sooner you get used to them the better it is... I think probably in a
month or so I’ll come back and get one anyway {voice trails off}(2 sec) {turns to
husband} how’d you? oh she’s not interested in you (7-3-2)

A minute later she continues:

B: G didn’t think she would {recommend a hearing aid} because he felt that.. I
don’t know {turning to husband} why didn’t you think she’d that I needed a
hearing aid?
G: Because I don’t it’s just periodically that you have difficulty
B: It’s just when I’m in a crowd or in with somebody um like when we go out
even if there’s just if there’s just L there this special friend of ours I don’t hear half
of what she says..uh she starts out and I hear the first of it and then she drops her
voice and I don’t hear the rest it..and G will tell me what she said.. if he remembers
you know.. if I ask him right away well he’ll repeat it but but that’s that what I
would want it for I wouldn’t need it around home… I need a megaphone around
home (laughs) so he could hear me cause my voice…
I: So you don’t feel you’re having any difficulty
B: At home
I: At home
B: No

A bit later in the same interview she ponders her perceived need for an aid, at least for
social outings, and her husband offers his opinion:

I: So do you think that you would have said yes to a hearing aid today if A had
said>
B: <If she’d said I think you should get one (right) then I I felt that she was being
honest and that I would probably have got it
I: I see
B: But because I wouldn’t wear it around home I don’t think but I would wear it
when I went out (right) and and I think (2 sec) at least I don’t think I would wear
it around home
G: You are very allergic to loud noises (7-3-2)

One senses that Betty is being pulled in two directions. She feels a hearing aid would help
her. She looked to the audiologist to take the initiative, to give her more information
about hearing aids at the appointment and get her started on trying one. Her husband,
however, maintains that she has very minimal difficulty hearing and a hearing aid would
bother her. By the next interview, Betty’s conversations and “dispute” with her husband
have left her more confused about her test results:

I: So you’re feeling a little bit confused right now about the test
B: u-huh very confused in fact yes
I: Did you feel confused after right after?
B: No I didn’t no I thought I knew what she said then I got home he said
well that wasn’t no he was sure I was wrong cause that wasn’t what he
understood so there you are (7-4-4)

Betty’s husband saw both his audiogram and hers, and in comparing his dramatic
loss in one ear to her symmetrical milder loss, convinced her that she had little
hearing difficulty. However, as Betty quoted earlier (7-4-1), “I know I don’t
hear fine.” This is another example of how test results (measuring impairment) do
not match a participant’s perception of her own hearing (handicap; participation). It’s also another example of how the visual presentation of test results can be so compelling.

By this second post-test interview, ten days after the test, Betty and her husband had decided to put off any decision about hearing aids until after the summer. By the last interview, five weeks after the test, when I tried to confirm Betty’s opinion about hearing aids, I discovered that Betty had wavered from her previous strong stance in favour of trying an aid. When asked if she thought she would be happier if she got a hearing aid, she answered: “I don’t know {slight laugh}.. I wouldn’t know til I tried it..you know..I don’t especially want one but if it would help I would like to get one” (7-5-13).

The other area in which she wavers from pretest interviews was in her perception of how well she hears her husband. In the first interviews she is clear that she has trouble hearing G. Following the hearing test she maintains that she has never had trouble hearing him.

Betty reported one unexpected and positive impact of the hearing test:

B: I think we {spouse and B} understand each other better now.. you know that we..since we’ve been to the hearing and realize that..there’s a problem...and since I’ve been to this speech therapist too I know I can force my voice but it just leaves it ragged and I’ll be croaky
I: So can you explain that comment a little more that you feel you understand each other better since the hearing test?
B: Well we were getting kind of aggravated with one another because we couldn’t either hear or make them hear you know and it wasn’t good for relations I didn’t feel. (right) and so I think we feel we both are a little more understanding of the other one...because we’ve been (7-5-5)

Like the speech therapy she mentions, the audiology appointment seemed to serve as therapy for her relationship with her husband, as she explains further in this same interview:

B: We’ve got a really good relationship {B and spouse} and that’s what I was worrying about this ...you know
I: So things are better
B: Yeah oh much better yeah and it was getting so we were not uh ..we’d communicate but like sometimes we’d holler at each other you know in
desperation because you didn’t hear something and we don’t we understand each other now that we have problems and it’s ok (7-5-9)

This last point Betty makes is interesting because it reveals that the diagnosis of hearing loss that the test provided was a form of problem-solving in itself. One expectation (related to seeking information) that Betty had when she booked the hearing test was to find out if her problems communicating with G were due to hearing loss or some other deficit such as memory or attention. It was a relief for her to know that hearing loss is the culprit not just for her but also for her husband. In that sense the test fulfilled one of her expectations in confirming that hearing loss contributes to her communication problems with her spouse. Is it also possible that she brings up this point to justify her delay in trying a hearing aid? Perhaps she rationalizes her decision to delay by saying that it is enough now just to know the source of the problem; their new awareness may be enough to improve communication, without need of a hearing aid at this time.

Summary

The findings for Betty illustrate many important points, already made explicit or implied in this chapter. First, usually the counselling session accounts for a small proportion of the total assessment time\(^7\), and this small amount of time is recognized by both patient and audiologist to be inadequate to relay all important information and answer questions. As a result, the audiologist is forced to choose a few nuggets of information about the test results to impart, and ends up trying to relay more information than the patient can absorb or remember. Consequently, patients may latch on to one piece of information, such as a portion of the visual presentation of the test results (a portion of the audiogram) or a percentage score. Second, a significant other has tremendous power to influence a patient’s interpretation of test results and future action, particularly if he/she is present at the counselling session with the participant. For example, Janet’s husband,

\(^7\) The length of time allocated by the audiologist to counselling in the present study varied, depending on the time taken to complete the audiologic assessment. It was usually in the range of 10 minutes (out of a 60 minute appointment). In one case (Phyllis), the counselling session lasted 24 minutes; almost all of this time was spent discussing hearing aids (Phyllis was fitted with a hearing aid about a month later).
who sat in on her counselling session and who has worn a hearing aid for some time, was supportive of the audiologist’s recommendation of a hearing aid for Janet. Such influences may complicate the case if the significant other is simultaneously trying to resolve related to hearing. In Betty’s counselling session, the audiologist chose to focus on Betty’s audiogram, in part for her husband’s benefit:

I: Now was his presence there did that change the way you did the counselling session? The things you said the way you said it? I know for example you went into quite a bit of detail about the audiogram (yeah) and I’m not sure if that was for his benefit...
A: ...I don’t know that my explanation was as influenced by his presence as compared to their interaction as a couple...I mean yes it influenced it because again with him we had talked about asymmetry or again the whole difference of the two ears being different so I think this was again a way of educating him to say look most people don’t have two ears that are different most people are more similar (7-audiologist-1)

This comment (and others from my interviews with the audiologist) demonstrates that she was perceptive in recognizing the dynamics between spouses, including G and Betty. The interactive effects among the three actors in the counselling session and G’s unusual asymmetric results, however, directed her counselling discussion to Betty’s quite mild impairment (for G’s benefit primarily), rather than her disability or handicap, which are quite severe, and which may not have been fully appreciated in the audiologist’s ‘snapshot’ of Betty. This example again highlights how audiologic counselling typically focuses on that which is measured in the test session, that is, degree of impairment and percentage scores in monaural word recognition testing, rather than on considerations of patients’ everyday functional issues with regard to hearing.

There is no way to know if participants such as Betty would have tried a hearing aid (by the end of this study) if any of the above parameters had been different, for example, if the audiologist had been more forceful in recommending a hearing aid or if she had had more time to spend in counselling (with or without the spouse). Having completed a lengthy self-assessing period before the hearing test, participants are keen to find solutions to their hearing problems. Leaving the test, their enthusiasm may be dampened by many factors (such as those noted in Figure 8.1); in Betty’s case, for example, these factors included her husband’s opinions (other influences) and the focus
that the audiologist and her husband placed on the audiogram, that is, on impairment rather than handicap or her self-assessed needs (mismatch between impairment and real-life experience). As a result, many participants, like Betty, delay further action and revert instead to another round of self-assessing, directing their confusion and/or indecision surrounding their test results (outcomes) toward a new spiral of decision-making regarding their hearing issues. The next (final) chapter of findings completes the discussion of this spiral by exploring the relationships among the categories, properties, and dimensions that emerged in the present study and by integrating the findings with the major research questions.
CHAPTER 9

PRESENTING THEMES AND INTEGRATING FINDINGS

This chapter has two purposes. The first purpose is to complete the presentation of findings by describing three inter-related themes that weave through the data of the present study. The second purpose of this chapter is to tie together the categories of self-assessing and help-seeking, their associated properties and dimensions, and these themes, to gain a clearer understanding of the core category of this study: the spiral of decision-making in self-assessing hearing.

Themes

Themes are concepts that emerge from the data that do not fit neatly into one section of the theoretical framework. Themes represent ideas that recur in slightly different forms in several parts of the framework. Three themes emerged in this study. They are: contrasting/comparing, cost vs. benefit, and control.

Contrasting/comparing

“Contrasting/comparing” refers to participants’ evaluation of their hearing problem with reference to a number of “yardsticks”. The yardsticks could be internal or external, including personal conditions that co-occur or that occurred previously, or environmental conditions that change across space and time. Contrasting/comparing helped participants put their hearing in context, for the purpose of prioritizing hearing among all of their life concerns. Contrasting/comparing was an ongoing activity that participants engaged in throughout self-assessing, help-seeking, and evaluating outcomes with regard to their hearing problems. In some situations, contrasting/comparing served to
underscore the hearing difficulties a participant experienced. In other situations, it served to downplay hearing as an issue in their lives. Thus, contrasting/comparing in different contexts could serve to either inhibit or promote help-seeking for hearing loss. The following paragraphs describe how this theme manifested itself in different areas of the theoretical framework.

At the personal level, participants contrasted the consequences of a hearing problem with other health conditions or sensory disabilities they experienced. The most common comparison was between hearing and eyesight. Janet, who has glaucoma, stated that she is much more concerned about her eyes than her hearing: “I’d be devastated if I couldn’t hear... mind you if I had a choice... I’d rather do without my hearing than my eyesight” (3-1-13). Other participants, who wear glasses but have no reported medical condition related to their eyes, echoed Janet’s comments that they would prefer to lose their hearing than their eyesight. In Phyllis’s words, “to not hear at all would be (2 sec) I guess not as bad as being blind but it would be... not good” (2-2-13). Betty reinforced this idea: “I would rather lose my hearing than my sight/ certainly socially it’s very important... but uh... (2 sec) it would come after my sight” (7-5-8).

Comparisons between hearing aids and dentures were also noted. In general, the problems associated with dentures were perceived to be greater than the problems associated with hearing aids. Phyllis, who wore dentures, commented: “I don’t know whether a hearing aid would be quite as bad as getting used to uh... false teeth” (2-2-7). Janet, who doesn’t wear dentures, expressed a similar sentiment: “I’d hate to use dentures... I’d rather wear a hearing aid than dentures” (3-4-9). It is interesting that participants’ comparisons were not between ears and teeth per se, but centered on the prosthetic devices of hearing aids and dentures and their perceived limitations.

Participants also contrasted their hearing across different points in time. Phyllis, for example, remarked on two occasions (both after her hearing test as she awaited her hearing aid fitting) how she used to have very good hearing: “I had really good hearing as I think back you know when I was young... I had really good hearing” (2-4-2). As well, participants compared their hearing day to day over the time period of this study. Having participants document their experience in writing during the study may have facilitated this
comparison.¹ Journal entries by Frances and Louise made frequent reference to there being "no change" or "no difference" in their hearing from day to day. In one entry, Janet wondered whether her hearing was improving: "There were six of us {at a dinner party} - no problems at all hearing- Could I be getting better? Wishful thinking" (3-j-Mar 11). Participants also compared/contrasted their hearing today to how it might become at some future point in time, usually with apprehension that hearing would deteriorate further. Phyllis remarked how she used to hear both her son and his wife but now she has trouble and then she asked me “Does your hearing just keep getting worse even after a hearing aid?” (2-4-19). This comment is interesting not only for the anxiety it reveals about future hearing, but for the hope held that maybe a hearing aid could forestall further decline in hearing.

In interviews, participants also tended to contrast the situations where they have difficulty hearing with those situations where they experience no problem, such as Cheryl who said: “Now I’m thinking of it I don’t know whether I really have that much of a problem in hearing (2 sec) um (1 sec) certainly not music cause they always play music too loud...even the opera I go to the opera regularly and it’s...uh...I can hear that just fine” (1-3-4). This comment raises a noteworthy point about the nature of presbycusis and its influence in comparing/contrastng. It is a common feature of presbycusis that, while soft sounds are more difficult to hear, loud sounds may be louder to someone with presbycusis than to a normal-hearing person. This may create confusion for someone self-assessing her hearing, because, as Cheryl indicates, episodes of louder sounds, such as at a concert, may seem very loud and pose no difficulty (in fact, you would not wish them to be amplified by a hearing aid). Comparing/contrastng one’s success hearing loud versus soft sounds may cause one to question whether one has a hearing problem and the usefulness of a hearing aid to correct a problem.

Participants compared their hearing to other people’s hearing, most notably to a spouse or to a peer (see Chapters 6 and 7). For example, Cheryl contrasted her hearing to that of her husband: “ And now ..that my husband’s got hearing aids..um (1 sec) I’m think I’m not hearing..as well as he does with his hearing aids” (1-1-4). Participants remarked

¹ More will be said in Chapter 10 about the role journal writing played in this study.
on several occasions that many among their cohort also have hearing problems (3-1-14; 4-1-11, 6-2-1): “I don’t have any problem \{hearing\} with my friends in my bridge group because they’ve all got problems \{hearing\)” (1-2-3). One can see how this comment by Cheryl could lead her to conclude that her hearing is not a problem. My research notes also documented contrasting/comparing comments participants made with respect to other participants in this study. For example, after I completed an interview with Phyllis and was heading to the door, she “asked about the other participant and whether she had her aid or not yet and whether I had more participants yet” (research note Nov. 13).

In evaluating the outcomes of their audiologic assessments, participants contrasted their interpretations of test results with their real life experiences of their hearing. Recall that Chapter 8 (in the section “interpreting results”) addressed the mismatch participants perceived between their interpretation of their test results and their everyday experiences of hearing, including their experience during the test itself. Participants remarked that their test results were worse than their perception of how they did during the test and in daily life. We have seen how this mismatch contributes to confusion about one’s hearing, and has the potential to prolong the self-assessment process and decision-making about hearing.

Participants were not the only players in the audiologic assessment to compare and contrast results. As discussed in Chapter 8, the audiologist compared each participant’s test results with that of a normal-hearing person, in terms of audiometric thresholds and/or percentage scores in a word recognition task. Significant others as well, most notably spouses who were present during the counselling session, also drew comparisons. For example, we have seen how Betty and her husband compared their audiometric results. This comparison may have influenced Betty to downplay her own hearing problems and move away from a hearing aid trial following her test.

In summary, participants contrasted and compared their hearing against many yardsticks, both in relation to themselves and to others, in the process of decision-making regarding their hearing. Contrasting/comparing was an activity these women engaged in to gauge the perceived severity of hearing among their other health concerns and to compare their own hearing across time, including projecting future scenarios (comparing
They used the perceived hearing of others (interpersonal comparing) as a yardstick against which to measure their own hearing performance, and as a way to evaluate the outcomes of help-seeking, particularly as a means to assess the likely and actual performance of hearing aids. Their interpretation of the results of their hearing assessment was also compared to their assessment of their day-to-day hearing. This last comparison may have resulted in further delay in help-seeking, when they experienced confusion and mismatch between these two assessments.

These findings with regard to the theme of contrasting/comparing may be presented as theoretical hypotheses, listed in Figure 9.1.

**Cost vs. Benefit**

"Cost vs. benefit" refers to assessing the relation between the cost of an action or item and the value of the resulting benefit. Participants’ comments in interviews and their journal entries, particularly in relation to self-assessing their hearing, reflected the cost-benefit evaluation they engaged in as part of the process of decision-making. The following will describe how this theme manifested itself in different properties and dimensions of self-assessing.

Participants underwent an assessment of "cost vs. benefit" in their reaction to hearing challenges, the first property in self-assessing. Participants adopt behaviours in conversation (the cost), such as "piecing together" or "persevering", to increase their understanding (the benefit). If these behaviours are successful, other benefits accrue as well, such as the opportunity for increased participation in conversational interactions, improved self-esteem, and an increased sense of control, because the more a participant understands in a conversation, the more active and self-assured a conversationalist she is likely to be. The costs are the cognitive, physical and emotional effort involved in "piecing together" or "persevering". The costs are perceived to be greater when others are called upon to assist a participant understand conversation. Such situations incur additional

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2 While not explicitly stated, it is perceived cost vs. benefit (and perceived control, discussed in the next section) that is under evaluation.
Theoretical Hypotheses on the Theme “Contrasting/comparing”

1. Contrasting/comparing is an ongoing activity in the spiral of decision-making in self-assessing hearing.

2. Persons contrast/compare their hearing along several dimensions in relation to a) the self (i.e., internal referents) and, b) the environment (i.e., external referents).

2.1: Internal referents in contrasting/comparing exist in two dimensions: a) in relation to other co-occurring health conditions, including sensory disabilities; and b) in relation to one’s hearing across time.

2.1.1: Contrasting/comparing hearing across time may be in relation to three reference points:
(a) short term past to present (e.g., yesterday compared with today)
(b) long-term past to present (e.g., how one heard many years ago compared with today)
(c) future compared with today (e.g., projecting how one may hear at a future date compared with today)

2.2: External referents in contrasting/comparing exist in three dimensions:
(a) in relation to how one hears in specific environmental situations (e.g., group conversation vs. one on one);
(b) in relation to one’s perception of how others hear, especially spouse and other cohort members;
(c) in relation to how others report the hard-of-hearing person hears.

3. The audiologic assessment is a special example of item 2 above, in that hard-of-hearing persons contrast/compare the test results relayed by the audiologist with their real-life hearing experience, and also with regard to the prototypical “normal”.

4. Individual events of contrasting/comparing can move a person toward or away from taking a help-seeking step (push-pull effect).
perceived emotional costs in the form of a potential diminution of one’s status as a conversation partner and costs associated with disclosing or drawing attention to one’s hearing problems. Such costs may involve a perceived loss of one’s sense of control (discussed below).

In their cost vs. benefit assessment, therefore, participants appraise conversation and make decisions about the efficacy of their efforts to improve understanding. Chapter 6 described how participants consider the comments of friends to be more important than the comments of strangers; thus they may make more of an effort to understand friends (greater perceived cost for greater perceived benefit). Cost vs. benefit, therefore, includes weighing not only the potential improved performance a certain action will yield, but also the importance of that improved performance to one’s life. The data also revealed the ongoing nature of appraisal in conversation. Participants may abandon a strategy (e.g., asking for repetition of an utterance) when it is unsuccessful after a few attempts, because with each attempt, the cost escalates relative to the benefit that may eventually be achieved.

Cost-benefit assessment evolves as an integral component of participants’ assessment of their hearing. For example, at an early point in self-assessing, actual or perceived hearing challenges may be infrequent and mild in consequence. At that point, the overall “cost” of hearing difficulty (its effects or consequences) is low enough that there is no perceived need for action related to hearing. As challenging hearing episodes increase in frequency and severity, there may be perceived benefit(s) in taking action to offset the escalating cost of hearing difficulties. Or, one may minimize one’s hearing challenges and/or their effects in an attempt to minimize the perceived costs of hearing loss. In the long term, as a hearing problem takes its toll on relationships and one’s sense of security, participants increasingly reflect upon and become more aware of their hearing difficulties, and they may experience more stress. The costs of not hearing come to outweigh the benefit of pretending that there is no problem, or of downplaying the problem, as Phyllis illustrates: “Now I have to let people know or I won’t know what they’re talking about”

3 Or, participants with little self-perceived hearing difficulty may find the “nagging” by family members to get a hearing test a greater “cost” than having the test.
(2-2-11). At this point, participants may be more assertive in using their resources to mitigate the problem and they may also consider seeking help (disclosing, booking a hearing test). In summary, taking a help-seeking step may be triggered when the costs of a hearing problem outweigh a participant's resources to deal with the problem.

It was evident that participants also undertook a cost vs. benefit analysis in considering their need for a hearing aid. Participants weighed the advantages a hearing aid might provide, compared with the hassles of adjusting to its use and the bother of maintenance and repairs. Some wondered if they would be exchanging the problems of a hearing loss for the problems of a hearing aid. Chapter 7 described how Louise, after her hearing test, even pursued the possibility of having ear surgery. She perceived the cost of ear surgery to be lower than the cost of using a hearing aid, for the same perceived benefit (an example of contrasting/comparing). Janet wrote her reaction to a newspaper article about a new surgery in her journal: “Did you see the paper this morning? That ear operation sounds like something I'd be interested in—no fuss and it's finished” (3-j-Mar 4).

In summary, the theme “cost vs. benefit” surfaces frequently in the data in this study. In self-assessing and help-seeking, and in evaluating outcomes, participants weigh the cognitive, emotional, social and other (e.g., financial) costs of particular behaviours, versus the benefits of these behaviours. These findings may be summarized in the form of theoretical hypotheses as listed in Figure 9.2.
Theoretical Hypotheses on the Theme “Cost vs. Benefit”

1. A help-seeking step for hearing is not taken unless the perceived costs associated with the step are fewer than the perceived benefits.

2. The evaluation of benefit takes into account two main aspects of hearing problems: a) the potential improved performance (e.g., better understanding of conversation) taking action in a particular situation (or at a point in time) may provide; and b) the importance of a particular situation in one’s life (e.g., greater importance attached to understanding conversation with friends vs. strangers).

3. Help-seeking steps for hearing problems that are perceived to be successful may result in secondary benefits.

4. Benefits of a help-seeking step are associated with a perceived retention or regaining of control.

5. Costs of a help-seeking step are associated with a perceived loss of control.

6. Costs of a help-seeking step are perceived to be greater if resources outside the hard-of-hearing person are required.

7. The balance between perceived costs and benefits of a help-seeking step shifts as the perceived severity of hearing problems increase.

Control

The theme of “control” refers to participants’ perception of the power they have to direct aspects of their lives. One of the “costs” associated with having a hearing problem is the perceived loss of control over aspects of one’s life affected by hearing. Loss or diminution of control related to hearing problems manifested itself in two ways in this study. There was loss of control “receptively” in participants’ communicative lives: a decline in the ability to receive information, affecting communication with other persons and affecting ability to monitor the environment (security issues). The second way control
was lessened was in participants’ perceptions of how they presented themselves to the world as a result of their hearing problem (this may be considered “expressive” loss of control).

The women in this study talked about feeling stress as a result of their hearing difficulties. Every participant (except Marjorie) cited situations in her life that were important to her in which she struggled to hear. Cheryl missed directions in her new art class. Phyllis lamented that she could no longer joke as easily with friends and had difficulty hearing her own phone ring. Frances was bothered by fast talkers, especially on the phone, and was troubled to miss the sounds of life that enable her to stay “aware” and “alert”. Louise missed precious conversations with her dying husband. Betty missed parts of conversation with her close friends and her husband. Even Janet, reluctant to admit she had much of a problem, admitted that she was distressed to miss conversation in the car or when playing bridge. Everyone mentioned that it was difficult to understand group conversation. Phyllis related how she would have more confidence if she heard better: “I think I’d feel more sure of myself for one thing...I think it {not hearing conversation} kinda holds you back a little bit” (2-1-13). Reflecting on their hearing, on what they miss and how they feel about it (reacting to consequences), brings their sense of loss to the surface. As Louise put it, “it feels like you’ve lost something” (6-2-3). Loss is not just loss of hearing, but loss of intimacy, spontaneity, confidence. The theme that emerges here is a lessening of a sense of control over one’s life.

Frances was the only participant to voice the word “control”, and her comments reflected her concern that a decline in her hearing may threaten that sense of control. She and other participants also reflected on security issues related to a decline in hearing. One may feel that one’s sense of control is lessened if the ability to monitor one’s surroundings and pick up important environmental sounds is jeopardized by a decline in hearing. Frances voiced this concern to the audiologist: “When I’m driving I do like to know if uh..like I hear a siren or whatever ok I don’t want it on top of me before I hear it...I thought well I’d better check it {hearing}..before it gets worse if its gonna get worse I’d better know and control it” (5-audio-4).
Having control over one's life is linked to a personal sense of responsibility and independence that participants value. Maintaining independence is of particular importance to those, like Louise, who live alone:

L: ...it's a different ball game when you're alone too (2 sec) very different
I: U-huh...how is it how is it different?
L: Well, you're you're strictly alone, you know it's um...they're {friends}are nice to you and they try to help you but you know you've got to stand on your own two feet (1 sec) because (1 sec) well that's way I've been brought up or not (u-huh) but uh I feel that's the way R {deceased husband} would want me to do it is to stand on my...own feet
I: Be independent
L: Yep.. so I try to do that (6-1-4)

The aging process may also threaten one's sense of independence and control. Participants reflect upon the aging of their bodies. As one ages there is growing awareness of how control may slip away as one's physical and cognitive abilities deteriorate. Visits to health professionals remind older adults that their bodies are in decline, and the lack of appeal of such visits may be another reason help-seeking is delayed, as illustrated by Cheryl's comment:

C: I hate appointments you know I just both D and I just hate them.....even our general checkup because we know darn well it means something else that we have to go to {laughs} and it's time consuming and it's not fun.. you know (right) and you just seem to be doing like that..it's either dentists or doctor...now audiologists (1-4-9)

Participants' reactions to hearing challenges such as "persevering" represent their attempts to hear and understand conversation better in order to regain their former role as an active and competent communicator, whether in conversation, as an active listener in a class (Cheryl), or in a meeting (Frances). In some cases these behaviours are successful insofar as improved understanding and, hence, an improved sense of control is attained. When tactics are unsuccessful or not utilized, other strategies to rationalize or minimize the problem may be invoked. These may restore one's sense of control in a different fashion, by working to diminish the importance of hearing in one's life, to give the impression that a loss in that arena is not a big issue. The discussion above regarding the cost vs. benefit theme highlighted how usually useful tactics may not be utilized when they
are perceived to have a greater cost than benefit. That cost is a perceived loss of control over how participants present themselves to friends, cohort members, and family.

Some participants may view a help-seeking step such as disclosing their hearing difficulties to others and booking and having a hearing test as relinquishing control, in that there is increased vulnerability in exposing one's hearing difficulties in public. In a way, self-assessing allows the participant to maintain control, whereas help-seeking may be perceived as relinquishing control to others. In disclosing hearing problems to their doctors, participants handed over decision-making regarding their hearing. They followed physicians' directives; if the doctor said hearing was not a problem, no further action was taken (perhaps until the next physician appointment). Similarly the audiologist was seen or expected by some participants to be in control of the hearing test and its outcomes. For example, I asked Cheryl if she thought my presence as observer during her test had any influence on her or the test. She replied: "It didn't have any effect on it at all (1 sec) I was sort of turned over to her {the audiologist} and that was it" (1-4-8). Also, recall how Betty expected the audiologist to take more control by recommending a hearing aid. Some comments, however, reflected a participant's worry about the control the audiologist is perceived to hold. In my last interview with Louise, she spoke of her most recent visit to her family doctor (for a sprained ankle) where they discussed her hearing. Louise thought it "strange" that the audiologist had sent a report to the doctor about her assessment and outlining Louise's decision to seek ear surgery:

L: she'd already informed him what I had done {referring to audiologist's report to doctor outlining Louise's decision to seek ear surgery}..(u-huh) which I thought was kinda strange...
I: Why did you think it was strange?
L: yes I did {misunderstands question}
I: Yeah...why?
L: Why? (yeah) because I feel that's my business if I want to do something (mmm) that kind of turned me off a little bit because I thought gosh my life isn't even my own (6-4-3)

In terms of their relationship with the audiologist, therefore, participants displayed a range of feelings about the need for, and perceived loss of, control regarding decisions about their hearing. Some expect to relinquish control to the audiologist, some expect the
audiologist to take more control than she does, and some are unwilling to give away any control over decisions regarding their hearing.

The costs associated with booking a hearing test may be offset by the benefits expected from the test, namely, learning more about one’s hearing, gaining closure regarding hearing issues, or getting help from a hearing aid. These outcomes may enhance participants’ sense of control. Betty, for example, was relieved to interpret from the hearing test that her communication difficulties (and her husband’s) were due to her hearing and not her memory or mental abilities.

As discussed in Chapter 7, the prospect of getting a hearing aid may also threaten one’s sense of control, partly because a hearing aid proclaims to the world that you are a hard-of-hearing person. This may contribute to participants’ preference for small hearing aids that may be easily hidden. Participants’ language reflects their association of hearing aids with loss of control. Cheryl, for example, stated that “most of my friends have given in to hearing aids” (1-1-4) as if some sort of surrender or relinquishment of control is involved in getting a hearing aid. She also talks of how her husband “didn’t fight it {getting hearing aids} at all” (1-1-12), as if somehow there is a battle going on in terms of one’s hearing and control over it.

The prospect of getting a hearing aid may evoke a fear of loss of control because it is an unknown object of mystery. Issues of self-efficacy arise when participants express apprehension about their ability to control and adjust to a hearing aid. Phyllis, for example, was concerned about the effect of background noise when using an aid: “Well {I’m} just wondering how I’ll ..cope with it {the background noise} you know (right)..so um I’m not wor’ not real worried about it I I know I can always turn it {the aid} off if I ya can’t you know” (2-4-7). Apprehension arises not only from perceived loss of control, but from the perception that the hearing aid itself may take over control, as Phyllis illustrates: “Like she {the audiologist} was saying that I could get a hearing aid where you didn’t turn it on and off yourself and I ..really didn’t feel I wanted that cause I think that would drive you crazy” ( 2-4-5).

There is also anxiety related to loss of control in the course of getting a hearing aid, connected again to the perception that the audiologist is in control. Cheryl continues
to self-assess her need for a hearing aid after her hearing test, and is reluctant to proceed with a hearing aid trial, partly because she thinks that if she proceeds, she will have somehow turned over control in decision-making to the audiologist:

C: yeah I’d forgotten about that {the fact that she could have a trial period with a hearing aid} (u-huh) I could have a six week trial couldn’t I but ...{audibly quicker breathing} (3 sec) I really {sigh} (2 sec) then what do ya’have a six week trial you say no it’s not I don’t want it or (u-huh) altogether..or what.. you know? (u-huh) whether they they would say well.. would they insist on trying another one’kind or (hmm) you know I I mean wi’six week trial is for that one hearing aid ..(u-huh) it’s not really as to whether you need one or not I think don’t you? (hmm) I mean this is the way I look at it (u-huh u-huh) so if I decided this hearing aid was was not appropriate would they start on another one would she start (I see) on another one (right that’s a good point) and it would go on and on (u-huh.. right)..and uh.. whether I’d have the courage just to say I don’t want one at all...well I would.. for that kind of money I would {both laugh} (right)....the courage (1-4-8)

Later in this same interview she sums up her feelings: “if I don’t really want this {the hearing aid} at all can I just say no forget it?” (1-4-13).

Control may be an interpersonal as well as an intrapersonal issue. Family members who suggest or insist that a relative get a hearing test may meet with resistance, perhaps because they are perceived to be imposing control over her sense of autonomy. A spouse who interprets for his wife may enjoy helping his wife but may also enjoy the element of control interpreting provides him in communicative interactions, knowing that his wife depends on him for information. For example, I asked Betty if her husband thought she needed a hearing aid. This was his response when she called him from the next room to solicit his opinion: “No I don’t think you need a hearing aid..as long as I’m around I can..interpret for you” (7-2-9). Betty’s husband fosters his wife’s dependency on him and his own sense of control by discouraging her from trying a hearing aid.

In summary, the perceived loss or diminution of control in areas of life as a result of hearing seems to be a cost that participants consider, consciously or sub-consciously, in self-assessing, help-seeking, and evaluating outcomes related to their hearing. A loss of hearing involves change and adjustment and a changing sense of identity that threatens one’s control over one’s autonomy and independence. Such effects may be compounded
in presbycusis, as the many physiologic changes that accompany aging reduce one’s sense of personal control and societal attitudes towards the aged foster dependency rather than independence. Figure 9.3 summarizes theoretical hypotheses on the theme ‘control’ identified in the present study.

**Figure 9.3**

_Theoretical Hypotheses on the Theme “Control”_

1. Loss or lessening of control is a perceived cost associated with having a hearing problem.

2. Loss of control related to hearing problems may be manifested in two ways: a) ‘receptive’ loss of control, and b) ‘expressive’ loss of control.

2.1: receptive loss of control arises from a decline in ability to receive information.

2.2: expressive loss of control arises from a decline in ability to control how one presents oneself to the world.

3. Taking a help-seeking step may be perceived to lessen or increase one’s control.

3.1: Control may be lessened if decision-making regarding one’s hearing is seen to be taken away from the hard-of-hearing person (e.g., by giving control to the doctor, audiologist, or hearing aid).

3.2: Control may be increased if expectations of the help-seeking step are met (e.g., if one learns more about one’s hearing).

4. Control appears to involve many intrapersonal factors, such as issues of self-efficacy, and identity. These factors may affect one’s need for control and influence and mediate how this need varies in different situations.

5. Control may also involve interpersonal factors, affecting the relationship between the hard-of-hearing person and significant others for whom control may be an issue.

The preceding discussion has highlighted three inter-related themes that emerged from the data and which relate to the process of decision-making regarding hearing. We now
move to consider these themes and their relation to the categories and core category identified in the present study.

Themes, Categories and the Core Category

Figure 5.1 in Chapter 5 illustrated the iterative process that links self-assessing, help-seeking, and outcomes in decision-making regarding hearing. In integrating the findings of this study, there are four main points to emphasize regarding this iterative process.

The first point is that the two main categories identified from the data in this study, self-assessing and help-seeking, and the outcomes associated with them, do not exist in isolation. Chapters 6, 7, and 8 described the categories of self-assessing and help-seeking separately in order to describe their individual properties and dimensions. The process of decision-making that participants engage in, however, is fluid and ongoing across these two categories and their properties and dimensions.

The second point is that the process of paramount importance in participants' decision-making around their hearing is the self-assessing process. The data in this study revealed that the self-assessing process began before the help-seeking step of booking a hearing test, when this study started. It is apparent from comments of participants and family members that the process started not weeks or months but years prior to booking a hearing test. This self-assessing process, however, did not end once the audiologic appointment was booked or even after completion of the hearing test. On the contrary, the data revealed a return to, and continuation of, self-assessing of hearing after a help-seeking step was taken and after its outcomes were evaluated. These participants demonstrated that the outcome(s) of the audiologic assessment may not necessarily resolve issues around hearing, but have the potential to raise new questions and dilemmas in decision-making.

The third point is that, after taking a help-seeking step, persons engaged in the iterative process described above do not usually return to the same point in the self-assessing and decision-making process that they were at when they took the help-seeking step. Therefore, the term “cycle”, originally adopted to describe this process, was
abandoned in favour of “spiral” in an attempt to better capture the dynamic and evolving nature of self-assessing and how it may be influenced by the myriad of factors laid out in the theoretical framework. As outlined previously, the main questions that appear to drive the iterative self-assessing process and decision-making are: Is my hearing a problem or not? If so, how significant a problem is it? and, Should I seek help or not?

This brings us to the fourth main point. The data in this study revealed factors that facilitated (enabled) participants’ taking a help-seeking step as well as factors that worked to delay help-seeking. Some factors, such as the influence of a physician, may have, at different points in time, either delayed or facilitated help-seeking. It is the changing balance of the cumulative effects of these many influences on participants over time that is reflected in the term “push-pull”, which describes how these influences vary in moving a participant toward or, alternately, away from either taking a help-seeking step, or from a decision already taken to seek help.

In summary, self-assessing, help-seeking, and evaluating outcomes may be described as an iterative process or spiral. Self-assessing predominates. Following a help-seeking step and evaluation of the outcome, participants return to self-assessing at a different point than where they were at the outset. Even though all participants had already booked an appointment with an audiologist for a hearing test before this study began, the data revealed the lengthy process of getting to that point, and the second (and third and fourth) doubts that persisted over the course of this study about their commitment to that decision and whether to proceed, for example, with getting a hearing aid. Movement toward a help-seeking step is not always a smooth progression. Participants may go back and forth (push-pull effect) about their decision to seek help, even after a step has been taken.

In the present study, the themes of contrasting/comparing, cost vs. benefit, and control emerged as important components of the self-assessing process. Figure 9.4 lists hypotheses illustrating how these three themes may relate to each other.
1. Contrasting/comparing, cost-benefit analysis, and control are key components in self-assessing hearing.

2. Each of the many dimensions along which a person contrasts/compares her hearing may be subjected to both a cost-benefit analysis and a control analysis.

3. The cost-benefit and control components act as weighting factors on contrasting/comparing. As an example, if one feels that one hears more poorly than a friend hears, the push toward help-seeking may be strong if one attaches great importance to hearing that friend (part of the cost vs. benefit evaluation) and one has a strong need for control in conversational interactions with that friend.

4. The interaction of these three components contributes to either 'push' the person toward a decision to seek help, or 'pull' the person away from the decision to seek help.

5. The decision of whether to seek help or not tends to be based on the cumulative effects of many episodes of contrasting/comparing and their cost-benefit and control analyses.

6. Regardless of whether a help-seeking step is taken or not, the person continues to self-assess hearing.

Figure 9.5 presents one theoretical model of how decision-making regarding hearing may unfold, integrating the themes, categories, and the core category of the present study. This model is an expansion of Figure 5.1, which illustrated the iterative process linking self-assessing, help-seeking and outcomes. In Figure 9.5, this iterative process is indicated by the arrows showing the pathways from self-assessing to help-seeking to outcomes and back to self-assessing. The push-pull effect that moves one toward and away from help-seeking is indicated by the decision-making box "need help?"
where one decides whether to move from self-assessing to a help-seeking step (YES), or “pull back” (NO) and continue self-assessing.

**Figure 9.5**

**Model Integrating Themes, Categories, and Core Category**

Dotted rectangles contain themes
Heavy solid rectangles contain categories
Arrows indicate iterative pathways that keep one within Self-assessing (NO pathway) or that move one from Self-assessing to Help-seeking to Outcome(s) (YES pathway)

Let us now return to some of the findings that illustrate how this model works (Fig.9.5), focusing on the three themes that comprise the category “self-assessing”.

Cheryl struggled with decisions about her hearing, as she continued to assess her hearing and evaluate her decision to seek help. As discussed in Chapter 6, frequent self-contradictions peppered her comments as she tried to decide if her hearing was a problem sufficiently bothersome to seek help. It has been noted, for example, how she contrasted/compared her hearing with her husband’s and concluded that she did not now hear as well as he did with his hearing aid (1-1-4). Her journal comments reflected the cost-benefit evaluation she performed as she anticipated her upcoming hearing test and its outcomes. In there she listed, after our first interview, the problems her husband has had
with repairs to his hearing aid. She concluded: “For the above reasons, if I am offered a hearing aid for a minor hearing problem I will hesitate to agree. The hearing problem may be less than the hassle of coping with the aforementioned problems.” (1-j-Oct5). This quotation illustrates Cheryl’s assessment of the perceived costs vs. benefits associated with getting a hearing aid. As already discussed, the theme of control is illustrated by comments such as how her husband “didn’t fight it {getting hearing aids} at all” (1-1-12).

Following her hearing test and the audiologist’s recommendation of a hearing aid, Cheryl returns to self-assessing her hearing. Here are the successive entries she makes in her journal in the days following her hearing test on October 16th:

Fri. Oct 17:
Bridge game here. I discussed my hearing loss to partners. They had known but only because I had advised them of my difficulties. I was testing my loss as they spoke. Had no difficulties even though one bridge partner speaks very softly. However, this may be because she was directly across from me and there were no other noise distractions.

Sat. Oct 18:
Talked on the phone to a sympathetic friend (with a hearing aid) and asked her if my hearing problem was noticeable to her. What I’m trying to do here is trying to find out if my hearing loss is a problem to others. I am not sure it is a problem for me. As you may gather, I am reconsidering the necessity of a hearing aid. And is the cost worth it, especially as hearing aids can be a nuisance.

Mon. Oct 20:
Had difficulty with the group conversation at my art class. Made the decision to postpone the appointment for a hearing aid ear mold.

Mon. Oct 27:
Art class. Had difficulty deciphering conversations—even with the lady sitting next to me. She speaks very quickly but I really would like to catch her humourous comments. I am reconsidering my decision re the hearing aid. Too bad I can’t try it out with my class (classes over soon) as this situation is a real test case...

Tues. Nov. 11:
I have decided to follow through on the hearing aid. Is it possible that my hearing has deteriorated more since my test? Had problems at my art class.

Note from the above entries the multiple use of the word “decision” and how she documents her flip-flops away from and back toward trying a hearing aid. Note also how her cost vs. benefit evaluation with respect to getting a hearing aid incorporates different forms of contrasting/comparing: she compares how much her hearing is a problem for others versus herself and, in her last entry above, compares her hearing on Nov 11 with her hearing on the day of her assessment. Even after she is fitted with a hearing aid,
Cheryl’s journal entries continue to reflect her doubts: “At times I wonder if this {the hearing aid} is an extravagance. Is it helping or not? I’ll persist.” (1-j-Dec7). Cheryl exemplifies how a help-seeking step and its outcomes, rather than representing a watershed or turning point in decision-making, may be instead a springboard for further self-assessing. Fig. 9.6 highlights the examples just discussed for Cheryl within the self-assessing component represented in Fig. 9.5. Please continue to refer to Fig. 9.6 in reading the next examples provided by Frances, and Phyllis.

**Figure 9.6**

*Illustrations of Themes within Self-assessing*

**SELF-ASSESSING:**

<table>
<thead>
<tr>
<th>Contrasting/comparing</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Before hearing test:</em> Cheryl compares her hearing to spouse’s</td>
</tr>
<tr>
<td><em>After hearing test:</em> Cheryl compares how she hears in art class with how she might hear with a hearing aid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost vs. benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Before hearing test:</em> Frances carries out frequent contrasting/comparing e.g., left ear vs. right</td>
</tr>
<tr>
<td><em>After hearing test:</em> Phyllis compares where hearing aid may help vs. where it may not help</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Before hearing test:</em> Many repairs and poor manufacturer service re: hearing aid; how spouse “didn’t fight aid”</td>
</tr>
<tr>
<td><em>After hearing test:</em> “Too bad I can’t try it out with my class”</td>
</tr>
<tr>
<td><em>Before hearing test:</em> Wishes to retain control by “taking a different attitude and testing myself more”</td>
</tr>
<tr>
<td><em>After hearing test:</em> Phyllis wonders about control over aid e.g. in noise; issues re: self-efficacy and unknown aspects of trying a hearing aid</td>
</tr>
</tbody>
</table>
Frances' journal entries contain many references to self-assessing. Her very first entry, after her first interview and sixteen days before her hearing test, begins: "I gave myself a little test today, the left ear was getting sounds of a lower range the right ear could hear higher notes, the clock was used for this in a quiet room" (5-j-Feb14). Frances also continues the self-assessing process after her hearing test. Here is her entry the day of her test: "Had examination and didn’t seem to find out any more than I already believed. I may change my mind as I will take a different attitude toward the problem and test myself more" (5-j-Mar2). Four full weeks after her hearing test her "experiment" (her words from journal entry of Feb 16) continues: "Still trying to find if and where the problem lies" (5-j-Mar31).

Chapter 7 included several quotes from Phyllis reflecting her apprehensions about hearing aids, for example, her ability to adjust to one. For Phyllis, the hearing test introduces new, perhaps difficult, questions that require decisions. Here is one of her first comments after her hearing test: "Now I’ll have to decide what kind {of hearing aid} I want" (2-3-1). The looming prospect of a hearing aid doesn’t make Phyllis reverse her decision to proceed or to delay further, but it does result in more and new comments about the negative aspects of hearing aids. For example, on the eve of her hearing aid fitting, she states: "I don’t know how I’ll like it in my ear" (2-4-2), and later in the same interview she assesses unknown benefits relative to financial cost, and contemplates her own hearing aid disuse compared with others’ disuse: "It’s a fairly big outlay...you know...and then if you don’t like it and you’re not going to use it well...and I’m sure there must be lots of hearing aids that are sitting in drawers that aren’t being used after people get them" (2-4-9). Even when queried about where a hearing aid will help her, Phyllis returns to her reservations about hearing aids, especially in their ability to handle background noise, and her ability to control them:

I: ...what um situations do you think the hearing aid will help you most in?  
P: I think on two and three people talking more than a group...I’m hoping I won’t have to ask people to uh repeat things all the time...I’ve thought back and over the years that I’ve anybody that I have known with a hearing aid they’ve all said that there’s so many instances where they want to tur’have to turn them off {continues on at some length about background noise} (2-4-5)
Phyllis’ self-assessing after her hearing test focuses on the relative merits of a hearing aid, incorporating aspects of all three themes of contrasting, cost-benefit analysis, and control. In seeking answers, she relates a story of a recent important meeting she attended held in a room with very poor acoustics, where she stated: “I don’t think I heard {laughs} hardly one word” (2-4-4). She continues: “There was a man two rows up from me and he had a hearing aid two hearing aids on and I thought gee I wish I knew him so I could go ask him if he actually hearing anything {spoken earnestly}” (2-4-4). Hearing aids are unknown objects of mystery. Phyllis’ seeks to know if there are benefits to hearing aids to offset the negative comments she’s heard about their many costs.

P: I don’t know why we veer away from it I guess it’s something that we’re ...sort of (1 sec) nervous of?..or you know..we don’t like the unknown ‘ort of thing u:h...I think a lot of people must though don’t you?
I: Must?
P: Veer away from getting one {a hearing aid}/ If there was some way that you could test them or kno’ and have some idea whether you might like it..but then you couldn’t without going through the tests and the...earmolds and everything (2-4-9)

Phyllis’s comment reflects her wish that she could test an aid before committing to one, a sentiment echoed by others. Such comments speak again to the issue of control and to participants’ desire to uncloak some of the mystery surrounding hearing aids in terms of what they can and cannot accomplish.

Summary

In summary, these examples demonstrate that participants’ self-assessing may occur on many levels. Phyllis was at a stage where she did not question that her hearing was poor enough to warrant help (in contrast to other participants like Cheryl). Rather, her questions centre on cost vs. benefit and control or efficacy issues pertaining to hearing aids; for example, she questions whether the benefit of an aid will be worth the costs in terms of dollars, whether a hearing aid will be effective in dealing with unwanted sound,
and whether her self-efficacy is up to the challenge of adjusting to a new device and the unknown challenges it may pose.

Overall, the findings from this study do not suggest that decision-making associated with self-assessment and help-seeking for hearing follows a smooth course toward rehabilitative solutions. Participants wait a long time to seek help, and they are influenced by many factors that facilitate or delay help-seeking. After they seek help, they may delay further action while they return to self-assessing their hearing, and incorporate their interpretation of the outcomes of help-seeking into ongoing self-assessment. At the time this study ended, participants were continuing their journey of self-assessment. Even those who proceeded with a hearing aid trial continued the process of self-assessing, as they had second thoughts about the benefits they would realize with their new device and about their ability to adjust to it. To repeat the four important points highlighted earlier: 1) self-assessing and help-seeking overlap; 2) self-assessing predominates in the spiral of decision-making; 3) this spiral is dynamic and evolves such that a new round of self-assessing does not begin after help-seeking where it was left before the help-seeking step was taken; 4) themes in self-assessing (e.g., contrasting/comparing, cost vs. benefit evaluation, and control) have a push-pull effect, moving one toward or away from help-seeking.

The next, final, chapter, will explore the implications of the findings of this study for the research literature, for future research, and for the important arena of policy and practice in audiology.
CHAPTER 10

IMPLICATIONS

This final chapter has four purposes. The first purpose is to reflect on the methodological approach and study design, and the strengths and limitations of the study in addressing the major research questions. The second purpose is to discuss, on two levels, the implications of this study in relation to the literature. On the first level, the findings of this study are compared with the studies of hearing loss and help-seeking for hearing loss discussed in Chapters 1 and 2. On the second level, a more general discussion of how the theoretical literature presented from other disciplines may inform audiology is undertaken. The general discussion is intended only as an overview of how theories, models, and constructs from fields such as social and cognitive psychology, health education and health promotion, and sociolinguistics may contribute to a better understanding of hearing loss and help-seeking for hearing loss. The third purpose of the chapter is to discuss the implications of this research project for policy and practice in audiology. The final purpose of the chapter is to highlight areas for further research, based on questions raised by the findings of the current study.

Reflections on the Study

It is important to keep in mind that the findings of this investigation reflect the outcome of an exploratory study of the research questions. Through a systematic grounded theory approach, this study has developed a substantive theory; that is, a theory developed from the study of one small area of inquiry and from one specific sample. The framework developed represents a composite picture of the findings for the seven participants of this study: each woman's experience is reflected in this framework, but the framework in its entirety does not reflect any one participant's experience. The theoretical
framework constructed in this study cannot have the explanatory power of a larger, more
general theory. The findings are tested for the data from this study but they can only be
extended beyond this sample to a broader population in the form of hypotheses that must
be tested using other methods (e.g., see Campbell & Stanley, 1963). The true worth of a
substantive theory lies in its ability to speak specifically for the sample from which it was
derived and to apply back to it (Strauss & Corbin, 1998). The findings have validity in
explaining the research questions for these participants. It is the job of further research to
discover the possible merit of these findings for other populations.

Strengths

The research design of this study was rigorous. It investigated the research
questions by combining in-depth interviewing of participants within an ecological research
approach that also included input from significant others (an important family member and
the assessing audiologist) and participant observation and audio-recording of the
audiologic assessment. The large amount of time spent with each participant over a five-
to nine-week period allowed for thorough investigation of the interview topics related to
the research questions.

The journal in which each participant wrote between interviews was a powerful
data collection tool. There were advantages of including journal-writing that were not
fully appreciated at the outset of this study. First, journal-writing was a very different form
of data collection from interviewing, in that participants could choose to write about any
aspect of their hearing they wished. In that sense, journal writing was a very open-ended
method of data collection. Second, the times when participants chose to write (or not
write) were sometimes revealing. Cheryl, for example, did not make consistent daily
entries, but she always wrote in her journal the day after her Monday night art class about
her successes and failures related to hearing the previous evening. Such information
provided a clue, not readily apparent from her interview comments, that her art class may
have been a trigger for booking a hearing test. A third advantage of journal-writing was
the continuity it provided between interviews. Sometimes an issue a participant wrote about in her journal was raised for further discussion when we met for our next interview.

My participant observation and audiotaped recording of each participant’s hearing assessment was a strength of this study, in that it provided a wealth of data about the interaction between the audiologist and patient that, to my knowledge, has not been captured in previous studies.

Another strength of this study lay in the time devoted to data analysis at the end of the data collection period. I was immersed in the data for over a year, after transcribing personally over ninety percent of all interviews. As described in Chapter 3, coding was carried out twice, using two approaches to grounded theory data analysis, the results of which corroborated each other. The time spent absorbing the data led to a high level of confidence in the categories, properties, and dimensions that formed the theoretical framework.

**Limitations**

The waiting list of the audiology facility imposed a limitation in this study, in that there was a relatively short time period (as short as six days; as long as fourteen) between my introduction to a participant (the day she booked a hearing test) and her hearing test appointment. While there was no difficulty arranging two interview sessions in that time window, it did not permit a “leisurely” amount of time to transcribe and analyze the data from the first interview in preparation for the second interview. For a few of the participants a few days more between the first and second interviews would have been preferable so that the initial data analysis from the first interview could have better informed questions for the second interview. This was not a problem, of course, for interviews held after the audiology appointment because there was more freedom in scheduling these interviews.

As well, in a few cases where participants had the same interview (interview 1 or 2) within a day or two of each other, there was less opportunity for the data from one participant to inform questions or discussion with the next participant. I had not
anticipated this limitation at the time I screened potential participants, partly because I was optimistic in my estimation of the time the initial data analysis of each transcript would consume, and partly because I had already waited several months between my two pilot participants (P1 & P2) and the appearance of the next suitable candidates and was therefore anxious to proceed with data collection.

A final remark concerns not so much a limitation of this study as a failed expectation. I asked each participant in this study to complete the Communication Profile for the Hearing Impaired (CPHI) at her leisure over the course of the study. The intent in including the CPHI was to compare the results from this quantitative self-assessment measure with my qualitative findings. I discovered, however, that each participant struggled to complete this questionnaire, due to its length (145 questions, divided into 5 sub-scales) and its response format (a five-point Likert scale that, from one sub-scale to the next, alternated between 1 and 5 to represent the greatest perceived problem).

Participants commented that many of the questions were confusing (even though they invested a significant amount of time trying to decipher them) and/or had no relevance to their lives. As a result, many of the questionnaire items went unanswered. As a check of their responses, I went over some of the questions verbally with participants when they returned the questionnaire to me. These verbal answers were often opposite to their written responses, reflecting, I believe, participants’ misunderstanding of the response format rather than a change in their opinion. In the end, this data could not be used in my study.¹

The Challenge of Methodology

As the categories of self-assessing, help-seeking, and evaluating outcomes emerged in my analysis of the data, my reflections led me to question to what extent my

¹ Other researchers and clinicians have noted impractical aspects of the CPHI. Noble (1998) cites Dillon et al.’s (1991a) use of the CPHI with a clinic-based population, where the lengthiness of the CPHI was also noted.
findings had been influenced by my research design. Is a research design that encourages participants to think and express their thoughts about their hearing through interviews and journal writing more likely to lead to the emergence of a category like ‘self-assessing’? If one could have magically (i.e., without research intervention) tapped into the thought processes and observed the behaviours of these participants on the cusp of their first audiologic assessment, would the findings have been similar? It is not possible to assess the impact of research activity on these participants and, hence, the resulting findings. Based on the following observations of the design and unfolding of this project, however, I am satisfied that there was nothing in the research design to bias the results significantly.

First, in the literature review and in the design and data collection stages of this research project, I was not aware that the construct of self-appraisal (labeled self-assessing in this study) existed in the psychological literature. Second, interview questions in this study addressed issues of process around hearing loss, as befits grounded theory methodology, but no interview question addressed the topic of self-assessing directly. Third, it was only during the data analysis, after data collection was completed, that the concept of self-assessing was identified and later crystallized as a central component of the theoretical framework. It was only after writing about the framework that I revisited the research literature and discovered the topic of self-appraisal. Finally, the concept of self-assessing in the present study is validated by the fact that some of the research findings on self-appraisal by other investigators who utilized other research methods resonate with findings of the current study (e.g., Cameron et al., 1993).

Having stated the above points, it is acknowledged that any research methodology that solicits opinion may prompt participants to greater self-assessing. The most that could be done is to minimize bias through careful research design, data collection, and data analysis.

Two other research dilemmas accompany the chosen methodology. First, there is the question of whether and how the study findings may be biased by the fact that the study included only participants who were predisposed or willing to be involved. Particularly with research topics that investigate psychosocial issues, this is an important
question. It poses a challenge to any qualitative methodology that demands a significant time commitment and a certain openness of participants.

The second research dilemma involves the hypothetical question of how one can ever know whether a participant may have cancelled her audiologic appointment had she not been involved in the study. In retrospect, it would have been a good idea to ask participants to reflect on this question. To the extent possible, researchers should carefully consider issues that involve the potential biasing of study participants’ opinions or actions.

Implications

Implications for the Literature

This section will review the findings of this study in relation to the literature presented in Chapter 2. The discussion will illustrate how the findings support or contradict the literature, how they extend the knowledge base, and highlight the advantages of an interdisciplinary approach to the study of help-seeking for hearing loss.

Major Contributions

The findings of this study contribute to the literature in three major ways. First, they elucidate the very active role that persons with hearing problems play with regard to decision-making about their hearing. The findings highlight the dynamic nature of decision-making and demonstrate the non-linear trajectory, the push-pull effect, that moves people toward and away from help-seeking, a pattern that may partly explain the long delay typical in seeking help for hearing problems. The process of self-assessing a hard-of-hearing person goes through before, during, and subsequent to a first audiologic

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2 After data analysis was completed, the secretaries at the audiologic facility in this study were asked about their cancellation and no-show rate for booked first-time appointments. They “guesstimate” that approximately 5% of first-time appointments are cancelled or are no-shows, with some of these appointments subsequently rebooked.
appointment is described. This process is iterative, reflected in the core category of this study as a “spiral of decision-making”. Questions that drive self-assessing revolve around whether one’s hearing is a problem, the extent and importance of the problem in one’s life, and the steps one should take to find solutions. The outcomes of specific help-seeking steps taken to answer such questions are evaluated and added to the pool of data about one’s hearing. In this context, the audiologic assessment that participants undergo is just one component, one point in time, in the self-assessing process.

This leads to this study’s second major contribution, that is, knowledge about a patient’s perceptions of her first audiologic assessment in terms of expectations, interpretation of outcomes, and how the future course of rehabilitative action may be influenced by the process and outcomes of the audiologic assessment, including the relationship between patient and audiologist. The findings of this study suggest that the current system of audiology service and product delivery may contribute to further delay beyond the initial assessment in finding solutions to hearing difficulties.

Third, this study contributes to the bank of information on older women and hearing problems, the challenges and consequences of hearing loss on their lives and the lives of important family members, and the responses of these players to those challenges and consequences.

These major illustrate the complex interaction among factors at the personal level (biologic/physiologic, psychological, behavioural) and the environmental level (social, physical, organizational, political) that influence the self-assessing, help-seeking and decision-making processes around presbycusis.

Hearing Loss

Psychosocial impact of hearing loss

The findings from this study are consistent with the fact that presbycusis is insidious in onset and progresses over time, with many factors determining an individual’s awareness (dimension of reflecting) and responses to it. The findings of this study support
and contribute to the established literature showing that hearing loss has wide-ranging effects on hard-of-hearing individuals (characterized by participants in this study in the dimension 'feeling stress') that appear to match some of the adverse effects cited by other researchers (e.g., Mulrow et al., 1990), such as social withdrawal, and affective reactions such as irritation, frustration, embarrassment, and fear of not fitting in. This study confirms the importance of hearing for one’s sense of security, one of Ramsdell's (1960) levels of sound meaning. Further, participants in this study spoke of their worries about future changes in hearing, and in particular the impact that further deterioration may have on their sense of security. This topic, the prospective view of one’s hearing, has had little coverage in the literature and warrants further study in relation to help-seeking for hearing loss.

This study’s findings support the idea of a link between a perceived lessening of one’s sense of control and the adverse effects of hearing loss on one’s life and one’s responses to those effects. In this context, these findings fit with the suggestions of Hallberg and colleagues (Hallberg & Carlsson, 1991; Hallberg & Jansson, 1996) that an individual’s reactions to hearing challenges and consequences work toward the goal of maintaining or regaining control (to continue to “fit in”), thereby minimizing threats to one’s identity.

The data in this study also support the research showing that hearing loss affects significant others, especially intimate relationships among family members (e.g., Hallberg & Barrenäs, 1993; Hétu et al., 1993). A reduced quantity and quality of interaction were the main effects on the relationships explored in this study, a finding also noted by Hétu et al., (1993). Possible gender effects related to this finding are discussed in the next section. The strategy of “distancing” that Hallberg and Barrenäs (1993) described wives utilizing with hard-of-hearing spouses may not be restricted to spouses but may also be a response of other family members (such as Marjorie’s granddaughter).

This study supports the findings of Hétu et al. (1993), showing that the description of the effects of hearing on the family may be quite different depending on whose perspective is taken. This study extends these findings in showing that the perceived severity of the hearing problems of the women in this study fell along a continuum, with
daughters reporting greater difficulty and for a greater number of years than the participants, and the spouses of participants tending to report less severity and for a shorter time. Research in this area of differential perspective has recently been undertaken by Noble, whose results from a family survey show discrepancies between males’ own assessments of their hearing disabilities and handicaps, and assessments by their female partners (Noble, 2000). Noble explains these results in terms of the notion of “privileged access” to certain categories of experience that differ between parties.

The findings in the current study make reference to the ‘communication dance’ between husbands and wives. This refers to the complex interactive effects in communication that help to determine the psychosocial impact of presbycusis. These include the hearing status of each partner in the communicative dyad (ability to receive the message), the vocal strength of each partner (ability to deliver the message), the perceived communicative role of each partner (e.g., who assumes responsibility for repairing communication breakdowns), the communicative intent of each party in conversation, and the importance each attaches to communication. The findings of the present study with older hard-of-hearing women suggest that it may not be uncommon to find that each partner in the communicative dyad, husband and wife, is hard-of-hearing. This has not been taken into consideration in the majority of studies into psychosocial aspects of hearing loss and in models of communication, which have focused on communication between dyads in which one member has a hearing loss and the other hears normally. The findings of this study illustrate the unique dynamics of communication between couples, especially those in very long-term relationships, and the particular communication challenges when both members are hard-of-hearing (even when one may hear better than the other).

Stigmatization (Goffman, 1963; Hétu et al., 1994) was not directly evident in the present study, perhaps because older, retired women were involved in the present study. Nevertheless, the perceived potential for stigmatization was in evidence, primarily in the way participants described abandoning or avoiding strategies in reacting to hearing challenges, and in their negative reactions to hearing aids, especially to larger, more noticeable aids. It was noted how issues related to control, self-image, and identity arise.
Gender and aging effects

The findings of this study add to our knowledge of the effects of hearing loss on women, particularly older women. Interviews with the women in this study revealed that they were very sensitive to the effects their hearing problems may have on others. These women expressed the belief that their hearing problems were their responsibility alone. It was their responsibility to find solutions to their problems with as little imposition on others as possible. The data revealed that family members, especially spouses, made little accommodation to assist these women to hear better, unless there was an explicit request for assistance (usually made in the form of a request for repetition of an utterance). Moreover, these women did not demonstrate any expectations that family members would accommodate them. For example, women did not question their move to another room or downstairs in order to hear a question their spouse asked. These results contrast with the findings for middle-aged men with noise-induced hearing loss (Hétu et al., 1987), who made significant demands on wives and other family to accommodate their hearing loss (see also Jones et al., 1987). The finding that the women in this study viewed hearing loss as their sole responsibility corroborates comments in the literature (e.g., Erdman & Demorest, 1998). With regard to aging, the high value placed on self-sufficiency among some people who came of age in the 1920s and 1930s when few community services were available may make older people, especially older women, uncomfortable asking others to make changes to accommodate them (Trychin, 1995). Perhaps this cultural-generational factor, the attitude that one should solve one’s problems alone, also contributes to help-seeking delay. Further, as mentioned in Chapter 2, the culture of medicine has also traditionally promoted the view of illness as an attribute of the individual, not society.

Studies that have looked predominantly at working, middle-aged men with noise-induced hearing loss have demonstrated equally detrimental effects of hearing loss on the family and the hard-of-hearing person (e.g., Hallberg & Carlsson, 1991). In contrast, findings in the present study indicated that the effects of reduced quantity and quality of interaction in relationships were most keenly felt by the women with hearing problems, rather than family members, who expressed comparatively little perceived handicap related
to their wife’s or mother’s hearing (partly perhaps as a result of the accommodating behaviors these women adopted). This finding may also reflect the greater importance that women attach to communication (corroborating Erdman & Demorest, 1998b, and Garstecki & Erler, 1995), especially as they get older and have a more restrictive lifestyle (Carstenson, 1996; Nussbaum et al., 1989). There was evidence of this sentiment in this study, with participants commenting that they felt communication was more important to women than to men. In summary, these findings support the results of other researchers (Hétu et al., 1993; Waridel, 1995) that suggest noteworthy gender differences in the psychosocial effects of hearing loss and in the way women and men react and respond to their own hearing problems, as well as to the hearing problems of others. The findings in this study support the notion that the social roles and communicative needs of women and men differ and that there are related differences in how hearing loss may affect one’s abilities to fulfill those roles, especially if a spouse is also hard-of-hearing.

The individual’s responses to hearing loss: Coping theory and research

Like the study of Hallberg and Carlsson (1991), this study uncovered behaviours that persons with hearing problems engage in, both to control and avoid the challenges of hearing. This study, however, distinguished between conversational strategies and longer-term responses to the effects of hearing problems. For example, self-contradicting (not documented among the studies reviewed) emerged in this study as a reaction to the longer-term consequences of hearing problems. A more emotion-based coping style may direct one’s responses to longer-term consequences of hearing loss, while problem-based strategies predominate in responses to hearing challenges as they arise.

In terms of problem-based strategies, the tactics that participants spoke of utilizing corroborate and supplement those reported in the literature. The strategies of asking for repetition (part of the dimension of persevering) and avoiding (which included pretending in this study), for example, are well-documented (e.g., Stephens et al., 1999; Tye-Murray, 1992), while the dimensions of piecing together and relying on others are more obscure in the literature (Pichora-Fuller et al, 1998). Of greater import than the particular tactics
identified, however, were participants' descriptions of how the choice of strategy depends largely on conversational context, including the social relationship between participants and communication partners, and the perceived importance of communication in maintaining one's sense of control and identity. Hence, the strategy of avoiding was reportedly utilized more often in large group interaction and among strangers, a finding echoed in Stephens et al., (1999). These findings, therefore, support a symbolic-interactionist perspective and Stokols's notion of congruence, which hold that one's behaviour is determined by one's dynamic relationship with one's environment.

Further, this study highlights the relationship between coping (both problem-based and emotion-based coping) and self-assessing. The findings also support the conceptualization of help-seeking as a form of coping (as put forward in the literature review). The dimensions of information seeking, gaining closure, and expectation of a hearing aid associated with booking a hearing test in this study fit well with Lazarus and Folkman's (1984) description of problem-focused coping, and with the link noted between information seeking and successful adaptation to a health condition (Felton et al., 1984).

Help-seeking

Help-seeking for hearing loss

The findings support previous research that has established that there is not a strictly linear relationship among handicap, disability and impairment (e.g., Swan & Gatehouse, 1990) nor between indices of health status as measured subjectively vs. objectively in non-audiologic studies of health services utilization (e.g., MacEntee et al., 1993). Contrast Janet, whose audiogram indicated significant hearing impairment, but who had very little self-perceived handicap, with Betty, who had significant perceived handicap but only mild impairment.
Factors that delay help-seeking

Not surprisingly, participants in this study matched those in other hearing loss studies in exhibiting lengthy delays before seeking professional hearing help. There were a greater number of factors identified in this study that appeared to move participants away from, rather than toward, seeking help. This study corroborated the literature by revealing the following factors that delay help-seeking for hearing problems. Delay may be caused by the limited awareness of hearing loss, arising partly as a result of its insidious onset (Willott, 1991). The perception that hearing loss is a "normal" part of aging that cannot be helped (e.g., Maurer & Rupp, 1979) results in delay. Physicians do not refer, or delay referring patients, even when these patients express their hearing difficulty to them (e.g., Gilhome Herbst et al., 1991), and many do so at numerous appointments. Hearing aids are perceived to be limited in their ability to solve hearing problems (matching the "bad" reputation of hearing aids noted by Getty et al., 1996). The current study also revealed participants' lack of knowledge about hearing aids (hearing aids as objects of mystery) as well as their lack of knowledge of other solutions to hearing problems (McCormick et al, 1994; Unger, 1994). Participants also reported resistance to change and low perceived self-efficacy in learning new skills necessary to use an aid (Getty et al., 1996). This study further noted the effect that cohort members may have, in that participants compared their hearing favourably to their cohort members, or noted how many of their friends also had hearing difficulty but were not taking action. The effects of lifestyle were also noted, as well as the effect of external factors to which hearing problems could be attributed to, such as colds or stress (Pichora-Fuller & Kirson, 1994).

Factors that facilitate help-seeking

This study identified a number of factors that facilitate help-seeking. At the personal level, there is a participant's personal experience and reaction to her hearing. This corroborates the findings of others (Brink et al., 1996; Swan & Gatehouse, 1990) showing that perceived seriousness of hearing problems (not necessarily related to impairment)
facilitates help-seeking. Participants in this study who perceived themselves to have trouble hearing described a variety of situations that were stressful because of their hearing. Some compared their hearing now to how good it was in times past, demonstrating awareness that over time their hearing was declining. A participant's personal experiences with the hearing loss of other family members, either in years past with an older relative, or currently with a spouse, sensitized her to how her own hearing problems may affect others. This finding does not appear to be represented in the literature. At the interpersonal level, relationships emerged as the most salient factor, consistent with the studies of the Montréal group (Getty et al., 1996; Hétu et al., 1987; Hétu et al., 1988; Hétu et al., 1993), Hallberg and colleagues (Hallberg & Barrenäs, 1993), and the findings of O'Mahoney et al. (1996). The strongest influence in this study was the relationship with the spouse. Participants and their spouses had difficulty hearing each other. Security issues facilitated help-seeking, as participants whose spouses were more hard-of-hearing than they felt the weight of responsibility, now and/or in the future, to be the ears of the household. Other family members, especially daughters, subtly or openly encouraged participants to seek help for their hearing. Cohort members and friends provided support by describing positive experiences related to help-seeking, whether as words of praise for the audiologist they recommended or reports of satisfaction with their own hearing aid(s). Social pressure from family and positive role models were facilitating factors also noted by Getty et al. (1996). The present study demonstrated that positive comments and recommendations by cohort members facilitated help-seeking by reducing the mystery and relieving the fear of the unknown surrounding hearing aids and hearing testing. Finally, a participant's physician may have influenced her to seek help by recommending a particular audiologist and/or otherwise endorsing the idea to have a hearing test.

A few of the factors mentioned above were noted to delay help-seeking action at one point in time, but to act as a facilitator at another point in time. Physicians, for example, were reported to play a significant role in delaying the booking of a hearing test, but were ultimately instrumental in the participant's deciding to book an appointment. A family member, similarly, may be initially supportive or neutral in help-seeking, as Betty's
spouse was, but may exhibit a dissuading influence later in the process, as Betty’s spouse did when a hearing aid trial was imminent. Thus, while physicians are recognized gatekeepers to help-seeking and hearing rehabilitation, a hard-of-hearing person’s significant others may also serve as gatekeepers to hearing help, as pointed out by Noble (1998).

Cues to action

As previously mentioned, the current study supports the findings of previous studies of help-seeking for hearing loss which indicate that one of the strongest cues to help-seeking action for hearing loss is the degree of self-reported disability and handicap; that is, the perceived seriousness of a person’s hearing problem (Swan & Gatehouse, 1990; Brink et al., 1996). The findings also confirm the role of social pressure from significant others in help-seeking (e.g., O’Mahoney et al., 1996). The present study also confirms the positive influence on help-seeking of meeting someone who is satisfied with an audiologic service or hearing aid, as identified by Getty et al. (1996).

A link between lifestyle change and help-seeking as identified in qualitative studies by Getty et al. (1996) and Meillier et al. (1997), was not evident in this study. The fact that two of the participants in this study had lost their spouse almost exactly a year before they booked their hearing test, however, raises the question of whether there may be a delayed effect of a major lifestyle change on help-seeking. The effect of a major lifestyle change on help-seeking warrants further study but it may be difficult to establish a cause-effect relationship with two events not paired closely in time.

Theories

Theories of health behaviour

The findings in this study are compatible with theories of health behaviour described in the literature review. As the Health Belief Model postulates (Maiman & Becker, 1974), help-seeking was related to participants’ perceived seriousness of their
hearing problems (i.e., effects on activities and/or participation). The exception was when help was sought primarily at the urging of significant others (e.g., Janet and Marjorie). In these cases, there was little perceived severity; however, these examples demonstrate that it may be the perceived severity of consequences to others, rather than to the hard-of-hearing person herself, that may trigger help-seeking. Further, the cost-benefit analysis described in the Health Belief Model emerged as a theme in this study that was noted in participants’ self-assessing, help-seeking, and evaluation of the outcomes of help-seeking steps. Thus, participants spoke of weighing the cost of asking for repetition of conversation in specific social contexts against the benefit of increased understanding, or the benefit of a hearing aid versus the costs involved in terms of financial outlay, along with many other factors. Interactionist theory (Lewin, 1935) and the theory of reasoned action (Fishbein & Ajzen, 1975) are upheld in that decisions were made based on perceived severity, and perceived costs and benefits, and also on the basis of the modeling of others, such as the experience of cohort or family members with hearing aids. Self-efficacy (Bandura, 1977) appears to be relevant in participants’ contemplation of hearing aids, particularly with regard to their beliefs about their ability to handle change and the new skills required to use a hearing aid.

Theories and models of health services utilization

The findings support the posited importance that predisposing, enabling, and reinforcing factors play in self-assessing and help-seeking, consistent with Andersen and Newman (1973) (as well as Green and Kreuter, 1991). Audiologists have traditionally been concerned primarily with enabling factors (such as the provision of hearing aids to facilitate hearing), without consideration of the predisposing factors that motivate one to seek help in the first place (Carson & Pichora-Fuller, 1997). Fortunately, increasing attention is being paid to such predisposing factors (e.g., contrast Goldstein & Stephens, 1981 with Stephens, 1996). This study also sheds light on many factors that reinforce delay in help-seeking, (these could also be termed dis-enabling factors). A physician who reportedly rejects or
downplays a patient's suspicion of hearing loss fails to reinforce her perception that she has a hearing problem, and this has the effect of delaying help-seeking. A spouse who minimizes his wife's need for a hearing aid may also delay his wife's decision to try one. This study's findings also demonstrate that the focus in audiology on quantifying impairment and disability leads to a framing of test results in counselling that may contribute to a patient's mis-interpretation of results and greater confusion regarding her hearing, possibly leading to further delay of a rehabilitative plan (i.e., the plan is dis-enabled or not reinforced). Thus, the audiology system itself may be an unwitting dis-enabler or be negatively reinforcing.

The findings of this study support the literature that views help-seeking as an interactive, contextual, developmental process (e.g., Haug et al., 1998; Strain, 1991). However, the theory developed from the findings of the current study does not support the conception of health service utilization as a uni-directional linear progression through various stages of delay (e.g., appraisal, illness, and utilization delay of Safer et al., 1979). Rather, the "push-pull" effect described above reveals that one may spiral back and forth, even on a daily basis, on the question of whether one's hearing is a problem, and whether help is needed. It may be that linear models are valid for acute illness episodes (upon which Safer et al.'s 1979 model was based) but are not valid in considering longer-term health conditions such as presbycusis. It is noteworthy that Safer et al.'s stages of delay model shares many similarities with an early version of the Stages of Change model (Prochaska & DiClemente, 1986), which had also been criticized for its failure to account for regressive as well as progressive motion along a trajectory toward action.

Mechanic (1995) describes illness behaviour as viewing illness "not only as a state of a person, but as a mode of coping" (p. 1208). This study, as well as the audiologic literature, appears to supports this notion. Although individuals with presbycusis are unlikely to label their hearing problems as an "illness", certain parallels may be drawn between illness behaviour and behaviours noted in help-seeking for presbycusis. For example, it does appear that as long as one perceives oneself to be coping well with hearing challenges, one does not perceive the need to seek help. Perceived severity may be
tied to help-seeking through the mediating effect of coping style and strategy and the degree to which coping behaviours are deemed effective (in certain cases by family members as well as, or instead of, the hard-of-hearing person). This link between the perceived effectiveness of coping efforts and help-seeking, as commented on by Cameron et al. (1993), warrants further research.

In summary, the findings of this study suggest that help-seeking for hearing loss is similar to help-seeking more generally. Among common intrapersonal factors, perceived seriousness or severity of symptoms is important, as is perceived efficacy of available solutions. Common environmental factors include enabling (or, more likely, dis-enabling) factors in the system of health care delivery, such as financial barriers (e.g., MacEntee et al., 1993).

The Role of Communication

When viewed against the backdrop of help-seeking for other health conditions, what stands in sharp relief as the most unique factor in help-seeking for presbycusis is the paramount role that communication plays in helping one to decide the extent of a hearing problem, and whether help is needed. No other health condition reviewed for this research appeared, in terms of help-seeking, to be so inextricably linked to an environmental factor as identifiably important as communication. The implication of this is that any of the complex layers of meaning that communication holds for human beings can influence one’s experience of, and help-seeking for, presbycusis. As the literature review outlined, communication across the lifespan shapes one’s relationships with others (Baltes & Wahl, 1996; Giles, 1984; Ryan et al., 1986) and with oneself (i.e., it contributes to the social construction of self, and to one’s sense of identity and control). The needs, goals, expectations, and roles of each interlocutor in communication combine with physiologic and cognitive abilities required to send and receive messages, thereby mediating the impact of, and one’s responses to, hearing loss. Thus, considered within an ecological framework, the role of environmental context takes on even greater multi-dimensional significance in hearing loss, in that answers to self-assessing and help-seeking questions hinge upon one’s
perceived success or failure in communication interactions. Effective communication is important not only to hear and understand messages, but to establish and nurture relationships (i.e., with the self as well as with others). In fact, the very "symptoms" of hearing loss, the triggers for coping responses (Cameron et al., 1993), are not symptoms that exist intra-personally in and of themselves (aside from a symptom like tinnitus) but are defined largely in terms of the success of interpersonal communication and, implicitly, how it impacts our definition of self. In a nutshell, "symptoms" in presbycusis are intimately tied to interpersonal communication; communication is intimately tied to one's construction of self and one's relationship with the self and others; hence, "symptoms" of hearing loss, and thus coping responses, including help-seeking, are tied to one's construction of self and one's relationship with the self and with others.

Viewed in this context, one can appreciate the lengthy and active self-assessing process involved in the experience of presbycusis, as threats to identity and control are monitored and decisions are made, consciously and sub-consciously. The theme of contrasting/comparing revealed the importance of internal referents (across health conditions or time) and external referents (e.g., between cohort or family members) in the negotiation of the self in transition.³

The over-arching concept of process that is at the core of the findings in this study is also an integral aspect of the findings regarding participants' interaction with the audiology system. This is an area of near-complete novelty in audiologic research. The findings add significantly to our knowledge base, and there are important implications for audiologic policy and practice.

Implications for Policy and Practice in Audiology

The findings and the theory developed from these findings raise questions that beg suggestions for improvement of the dominant system of audiology service delivery in place

³ The topic of social comparison was not reviewed in the literature, because it was an unanticipated finding that did not emerge in my review of help-seeking in general, and certainly it has not been given consideration in audiology. It is considered further under "future research".
today. Audiologists are dedicated professionals who have a genuine interest in helping their patients solve their hearing problems. The audiologist who participated in the present study is recognized by both peers and patients to provide high quality service and expertise to patients. Nevertheless, these findings reveal that, even within such an exemplary practice, the current paradigm of audiology practice limits who accesses the services available and limits what may be achieved to solve hearing problems among those who do enter the system. The following paragraphs highlight how the findings of the present study illustrate three major opportunities to better serve patients than the current practice paradigm of rehabilitative audiology, as practised in the United States and Canada. This paradigm, based on the medical model, works at odds with the goals of the patient and the audiologist in at least three main ways: 1) the focus is on measuring the hearing impairment; 2) there is an expectation that rehabilitation will happen quickly, within a specified time frame; and, 3) there is a focus on the hearing aid as the main rehabilitative tool.

Audiologists are aware that a first-time patient may have had hearing problems for many years. The findings of this study reveal that patients have not spent that time in a passive stance regarding their hearing; they have been actively assessing their problems and working on decision-making around hearing. By the time they see the audiologist to be tested, they have devoted much time and energy to assessing their hearing, doing their own “testing”. Moreover, the process is not complete and, as a result, they are not necessarily ready psychologically to adopt a recommended solution. To absorb and synthesize the audiologic assessment and its outcomes (the volume of new and perhaps troubling information it provides) the patient needs time. The patient will go through this process whether or not they “comply” with the audiologist’s recommended rehabilitation plan.

It is widely acknowledged that a positive attitude and self-motivation to try a hearing aid is crucial to the success of a hearing aid fitting. There has been the long-held and continuing assumption in the audiologic literature that this attitude prevails among the vast majority of potential hearing aid candidates attending their first audiologic assessment. Goldstein & Stephens (1981) and Stephens (1996) state that about 90% of
patients fall into these researchers’ audiology management model’s Type I and II classification of attitude, that is, either positively disposed to try a hearing aid (Type I), or positive with mild complications (Type II) (where mild complications are defined as such factors as a difficult audiometric configuration, or problems with manual dexterity). The findings of the current study suggest that far fewer than 90% of first-time attendees who have presbycusis are ready to try a hearing aid. It is recognized that Stephens and colleagues work in Britain where a hearing aid is provided at no cost to the patient, and thus may be more readily obtained. The current study, however, outlines other reasons, aside from financial, why one may delay trying a hearing aid, even if one is recommended by the assessing audiologist.

The Focus on Measuring Impairment

The focus of the audiologic assessment on measuring impairment and (to a small extent) disability may contribute to a patient’s further delay taking action after the test. This study demonstrated that there may be a mismatch between the interpretation of test results that patients take away from their hearing test and their day-to-day experience with their hearing. The true source of this mismatch is the disjunction between current audiology practice, which focuses on measuring impairment, and the day-to-day hearing experiences of hard-of-hearing persons, which reflect activity and participation limitations. The audiologist, in the post-test counselling session with the patient, relays results that are based on impairment and disability measures. Until the practice of audiology incorporates test measures that reflect people’s real-life experiences with hearing loss, rehabilitative products and services will likely continue to be rejected by many hard-of-hearing persons. Keller & Carroll (1994) state:

Most patients make a self-diagnosis. It is human nature to do so. If your diagnosis and the patient’s differ, the patient will act based upon his or her own diagnosis. Consequently it is imperative that you understand and discuss the patient’s (self) diagnosis (p.139).

This comment was made in reference to physician-patient interaction, but has equal relevance to the interaction between audiologist and patient, especially in light of this
study’s demonstrations of the protracted process of self-assessing a person may undergo before seeking hearing help.

The Focus on Time

Audiologic rehabilitation is expected to be accomplished rapidly. Clinic schedules allot one hour (or less) for an initial appointment within which time the audiologist must gather pertinent information about the patient and her hearing problems to decide upon and begin implementing a rehabilitation program. If the patient ‘complies’ with this plan, the process (most often consisting of a hearing aid fitting) is completed by the end of an additional two to four appointments of one hour or less. Contrast this approach with the hours spent by a speech-language therapist to achieve her goals of improved communication, or the hours spent by an occupational therapist toward the goals of improved performance in activities of daily living.

The comments of participants and the audiologist in this study illustrated their desire for more time together in this first appointment. Participants wanted more time to ask questions and get information about their hearing and rehabilitation options. Seeking information was an expectation of the audiologic appointment for all participants. Patient satisfaction has been correlated with the amount of time a professional spends with the patient (Doyle, 1994). Within a different practice paradigm, more time spent together would give the audiologist and the patient greater opportunity to do the following: 1) assess the individual nature of the patient’s hearing difficulties, her view of what is most important to hear in her life, and her expectations and goals for her hearing (in essence, a synopsis of what participants talked about in this study); 2) discuss the patient’s questions about hearing and hearing aids; 3) discuss information about other rehabilitative options (e.g., ALD’s and therapy). Alternatively, a second appointment could be scheduled to provide this information, perhaps as part of an individualized (or group) rehabilitation program. This extra time would allow the audiologist and patient to assess the patient’s true motivation for rehabilitation (e.g., in the present study, participant Betty may have been more receptive to trying a hearing aid after her assessment had there been more time to discuss the issue, alone with the audiologist, as well as with her husband present).
Investing more time in the initial appointment, or adding a second one, may help a patient move more smoothly along the trajectory of the self-assessing process, calling to mind research that correlates patients’ acquisition of information with their adjustment to a health condition (e.g., in relation to diabetes, Felton et al., 1984).

The Focus on the Hearing Aid

The third opportunity to improve current audiology practice is to shift away from the focus on the hearing aid and the pairing of remuneration with the fitting of hearing aids. In the current system, the financial viability of a private practice is often tied to the number of hearing aids fitted, and not to the time spent with a patient on either a rehabilitation program to accompany the fitting, or on other rehabilitative options besides a hearing aid (e.g., communication strategies training). The philosophy that views the hearing aid as the focus of rehabilitation spills over to the public, who are of the opinion (influenced by hearing aid industry advertising) that the only solution to a hearing problem, once professional help is sought, is to get a hearing aid. Participants in this study, for example, demonstrated little or no knowledge of other solutions to hearing problems besides a hearing aid. It follows from this philosophy that patients perceive that success in solving their hearing problem is tied to the performance of the hearing aid. With such expectations attached to the device, it is not surprising that many who are skeptical about the efficacy of hearing aids delay seeking help, or that the “hearing aid in the drawer” syndrome is so prevalent (Kochkin, 2000). Once they reject a hearing aid, these patients are unlikely to repeat the testing process in the near future. Moreover, the poor modeling of unsuccessful users reinforces the public’s perception of hearing aids as an ineffective solution to hearing problems and discourages them from seeking help for hearing problems.

As part of the continued process of self-assessing, participants in the present study, at the point they visited the audiologist, were still undergoing an evaluation of the costs versus benefits of trying a hearing aid. Participants viewed a hearing aid as an all or nothing commitment, and expressed the wish that they could try one in particular settings.
(e.g., Cheryl wished to try one in her art class) to measure its effectiveness. If this were a possibility, they would not have to “join the clan” (in Louise’s words) without some knowledge of how a hearing aid might help them.

The data in this study support the need for other options to this “all or nothing” approach to audiologic rehabilitation. A model of practice that remunerates service rather than hearing aids would support other options. For example, a patient who may be straddling the line between trying an aid or not may be open to other rehabilitative options, if they were offered as part of a more ecological approach to rehabilitation. For example, my observations in this study suggest that a program of education and training in strategies to solve communication problems would be welcomed by several participants and their families, with or without a hearing aid fitting. Such a program (even one session) would help satisfy the desire they expressed for more time with the audiologist to discuss results and their implications, and perhaps gain some closure by reconciling test results with personal perceptions of hearing. Such a session(s) could occur in an individual or group format, keeping in mind that someone grappling with self-image and identity issues around hearing may not want group interaction at this point. An open, regularly-scheduled drop-in program of audiologic rehabilitation at the audiologist’s office (e.g., as described in Holmes, 2000) may be an excellent way to draw in someone who wants to learn more about her hearing and ways to solve hearing problems while allowing her to retain control of the situation.

An ecological philosophy of audiologic rehabilitation is characterized by a problem-solving approach whereby the audiologist, hard-of-hearing person and significant others work together to find solutions to hearing problems. Moreover, the audiologist should not be viewed as the only hearing professional on the team. The success of community-based programs, such as described in Chapter 2, confirms the important role that hard-of-hearing consumers, trained volunteers, and ancillary personnel (e.g., audiometric technicians) play, for example to educate the public about hearing and

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4 Third-party payers (such as Federal funding agencies in Canada like Veterans Affairs) are in a position to influence such a philosophical shift by enacting policy changes that reward service delivery, such as comprehensive audiologic rehabilitation programs with or without a hearing aid fitting, and de-emphasizing the current fiscal focus on the hearing aid.
communication before hearing is a problem (Worrall et al., 1998), and to provide ongoing support to hard-of-hearing persons in residential care facilities (Carson, 1997; Hoek et al., 1996). Some of the findings of the present study support the need to expand such community-based programs: 1) Such programs satisfy the public’s need for information about hearing, hearing loss, and communication strategies; 2) The information and education such programs provide take some of the burden of education away from audiologist whose appointment time with a patient is limited; 3) Ongoing hearing education coupled with audiologic assessments, offered by audiologists and community-based programs, provide a health promotion approach to hearing. Other than hearing screening programs in industry, there is currently no audiologic equivalent of the preventive care seen in medicine or dentistry. Yet participants in this study for whom a hearing aid was not recommended were pleased to have had their hearing tested “before you really need it.” There are benefits in establishing rapport with “future patients” before the link between hearing test and hearing aid is cast in his/her mind (as it was with some participants in this study).

A few final suggestions may be relatively easily incorporated into audiology practice, without waiting for the broader organizational changes discussed above to happen. First, longer appointment times (minimum 90 minutes) for the initial audiologic assessment should be scheduled. Second, consider how patients may be educated about their upcoming audiologic assessment ahead of time. One option is a mail-out (coupled with waiting room material) that describes what to expect in the appointment, and the services and products offered. This suggestion arises from findings in this study that illustrated that participants had very little knowledge of audiology or audiologists, and made comments that appear to associate audiologists with technicians who fit hearing aids. Third, as much as possible, obtain information before the appointment about the patient’s perception of her/his hearing problems and expectations regarding solutions. Some valuable information may be obtained, as in this study, by means of a journal kept daily by a patient for even a week before the appointment (preferably mailed to the patient to emphasize its value to the assessment). Make sure that written material sent to older adults is in large print. Finally, in the assessment of the patient devote some thought to
what the patient should take away from the appointment. If only one piece of information can be relayed, what will it be? Patients' expectations for the appointment and their understanding of the information relayed to them should be checked.

In summary, the findings of the present study confirm the need to expand the ecological paradigm of audiologic rehabilitation beyond the examples cited in this paper. Within such an approach, hearing aids are but one component of an array of service and product options available to help solve the particular hearing problems of patients. Achieving this change requires that audiologists individually reflect upon the changes they can make to their own practices, and, in partnership with other stakeholders, advocate for broader organizational change in policy and hearing health care funding. A paradigmatic shift to an ecological approach may result in more people seeking help for hearing problems, fewer people delaying further action after their first audiology visit, and, ultimately, greater satisfaction for both patients and audiologists.

Implications for Future Research

The findings in this study raise numerous questions that await further research for answers. The following are but a few of the broader research possibilities suggested by the results.

There is a need to investigate further the major findings of this study, with more participants, and utilizing different research methodologies. In particular, the core category, the spiral of decision-making in self-assessing hearing, warrants further study to test whether it applies to a wider and/or different sample than this exploratory group of participants.

The themes of control and cost vs. benefit have received some attention in the literature on hearing loss (Garstecki & Erler, 1998; Rutman & Boisseau, 1995; Scott et al., 1994), but not specifically as they relate to help-seeking. The concept of personal control and its influence in the positive physical and psychological well-being of older adults have been a focus of social psychologists (Baltes & Baltes, 1986; Rodin, 1987). It is
postulated that specific domains of control (e.g., health, personal economic conditions, transportation, relationships, personal security) and expectancies regarding control in those domains vary differentially in aging (Rodin, 1987). It would be interesting to investigate the role that presbycusis plays in changes in personal control with aging, and reciprocally, how one’s sense of personal control affects help-seeking for presbycusis.

Further to this, the construct of control is worth investigating as it pertains to the audiologist’s role in relation to a patient for whom a hearing aid has been recommended. The findings of this study suggest that there is a fine line the audiologist sometimes walks between a more active “pursuit” or attempt to convince the patient to proceed with a fitting, and a stepping-back attitude to let the patient decide for herself. Again, service delivery issues play a role here as much as personal philosophy and patient expectations. For example, Cheryl stated that she would have felt “obligated” to proceed with getting a hearing at her first appointment if an earmold impression had been taken at that time. Instead, this was scheduled for a follow-up appointment, by which time Cheryl had reconsidered, postponed her decision to try an aid, and cancelled the appointment. This example again highlights the process that hard-of-hearing persons go through in self-assessing and help-seeking, with the audiologic assessment just one frame in the self-assessing footage.

The theme comparing/contrasting that emerged in this study has not been documented, to my knowledge, in the audiologic literature. I have discovered that the construct of social comparison is salient in the sociopsychological literature (e.g., Festinger, 1954; Wood, 1989), is posited to be a coping process (e.g., Tennen & Affleck, 1997), and plays a role in self-appraisal (e.g., Felson & Reed, 1986) and in adjustment to chronic illness (e.g., Helgeson, 1992). The intersection of the construct of social comparison and related theory with specific audiologic research topics such as help-seeking would be a very fruitful avenue of investigation. It also warrants study from the audiologist’s perspective, in terms of the ingrained ways that audiologists use comparison (e.g., contrasting a patient’s results with results from a “normal” hearing person) in their testing and counselling of patients.
The theory developed in this study posits that all three of these themes—contrasting/comparing, cost vs. benefit, and control—play a significant role in the process of self-assessing hearing, but the nature of the relationships among these three constructs remains to be determined. Future research may elucidate these relationships, as well as how their influence in help-seeking may vary among different hard-of-hearing populations, for example, older adults vs. younger adults, women vs. men, and persons from different cultures.

The current investigation confirms the need for further studies to elucidate the differences between women and men in their reaction to, and actions taken, for hearing problems. The findings of the present study suggest that women may adopt different coping strategies than men to deal with hearing problems, assume greater personal responsibility for their hearing problem, be more sensitive to the effects their hearing difficulties have on others, and make greater accommodation for others.

More research is needed on the role physicians play in help-seeking for hearing loss. This study and others suggest that physicians are partly responsible for the delay in help-seeking for hearing problems. Do physicians play a similar dis-enabling role in help-seeking for other health conditions, or is presbycusis unique? In other words, how do physicians' attitudes about hearing loss and its remediation differ from their attitudes toward other age-related health issues? Research into such questions must be conducted with physicians directly to ascertain their perspectives and involve them in ways to increase their referral rates to audiologists.

The crucial role that communication plays in self-assessing and help-seeking for hearing loss, as discussed earlier, calls for more research into the role of communication in the social construction of self, for both normal hearing and hard-of-hearing persons. What role does communication play in the social construction of the identity of normal-hearing persons and how may this differ for hard-of-hearing persons? What roles do gender and aging play? In general, there is a need for more research into the role that issues of self (ego) such as identity and control play in how one perceives and responds to hearing loss, and in how one interacts with the audiologist, as well as health care personnel more generally.
Perhaps the greatest research need identified by this project is a need to continue research on the nature of the interaction between audiologist and patient as it occurs in practice and how this interaction impacts the rehabilitative process.

Concluding Remarks

My interest in the research questions that guided this study arose many years ago out of my experience as a rehabilitative audiologist. Between then and now there has been considerable research and development that has resulted in significant changes in the range and type of hearing instruments at audiologists’ disposal. As with developments in many scientific fields, however, human factors research (e.g., into the uptake of technology) has been neglected in the headlong race to improve technology. In audiology, as noted in Chapter 1, the effects of this research imbalance are constantly noted and have been present for several decades now, at least in the USA. Only about one in five persons who may benefit from professional hearing help seeks it. As important as hearing aids are to audiologic rehabilitation, it is now obvious that making smaller and more sophisticated aids is not sufficient to reach those who are not seeking help. Hopefully the findings of the current study have convinced the reader of the need to broaden ecological practice and research in audiology, by increasing our attention to the combination of relevant individual biopsychosocial factors and physical and sociocultural environmental factors. It is important that other disciplines, especially psychology, inform this expansion of research and practice. Of particular importance is the need for greater reflection in audiology on the enhanced role that each audiologist and the system of service delivery may play in an ecological practice paradigm based on a relationship with patients not of “compliance” but of “therapeutic alliance” (Zola, 1986). It is hoped that this study serves as one small step towards the goal to reach more people who wish to resolve their hearing problems and to facilitate their quest for meaningful and satisfactory solutions.
REFERENCES


Dillon, H., James, A., & Ginis, J. (1997). Client Oriented Scale of Improvement (COSI) and its relationship to several other measures of benefit and satisfaction provided by hearing aids. *Journal of the American Academy of Audiology, 8*(1), 27-43.


## APPENDIX A

**Schedule of Interviews for Participants and Family Members**

Year: 1997-98

<table>
<thead>
<tr>
<th>Interview</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>HA</th>
<th>6</th>
<th>FM</th>
</tr>
</thead>
<tbody>
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<td>Oct. 4</td>
<td>Oct. 15</td>
<td>Oct. 16</td>
<td>Oct. 24</td>
<td>-</td>
<td>Dec. 5</td>
<td>Dec. 5</td>
<td>Oct. 4</td>
</tr>
<tr>
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<td>Feb. 18</td>
<td>Feb. 19</td>
<td>Mar. 20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Feb. 20</td>
</tr>
<tr>
<td>Frances</td>
<td>Feb. 13</td>
<td>-</td>
<td>Mar. 3*</td>
<td>Apr. 14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Louise</td>
<td>Feb. 23</td>
<td>Mar. 2</td>
<td>Mar. 9**</td>
<td>Apr. 15</td>
<td>-</td>
<td>Mar. 20***</td>
<td>-</td>
<td>Mar. 21</td>
</tr>
</tbody>
</table>

NOTE: The audiologist was interviewed the same day as the audiologic assessment, except for one participant (Phyllis), where the interview was held the next day.

* Post-audio interview was held at participant’s home the day after the test; for all other participants, the post-audio interview was held the same day as the test.

** Post-audio interview was held later the same day as test, in participant’s home

*** Appointment for earmold impression (not hearing aid fitting)

HA = Hearing Aid Fitting

FM = Family Member
APPENDIX B

Interview 1: Topic Areas

1) I just wanted to start with some background information. Can you tell me about yourself? (explore personal and work history; important life events)

2) What kind of activities have you been involved in over the years? What kind of activities are you involved in these days?

3) How is your health?

4) How would you describe your hearing? (explore problems; difference between ears)

5) How long would you say you’ve had trouble hearing? and, How long has it been since your hearing was good?

6) Have you noticed any significant change in your hearing over the last year?

7) Do you have any other problems with your ears? (e.g., tinnitus, earaches etc.)

8) If you could choose only one situation in which you could hear better, what would it be?

9) Why do you think you’re having your hearing tested now as opposed to say last year or six months ago?

10) What do you do in situations where it’s difficult to hear? (explore coping strategies)

11) Do other people you know have hearing loss? Hearing aids? Do you talk about it?

12) Do you think your hearing difficulty has affected your family or friends in any way?

13) Do you think you’ll have to get a hearing aid?

14) What has been your experience with health professionals over the years? Have you been satisfied with the service you received? (explore relationship with family physician and other professionals, qualities equated with good service by a health professional)
APPENDIX C

Interview 2: Topic Areas

1) What was it like writing in that little journal I gave you? (explore points raised)

2) What do you expect to happen at your hearing test? (explore expectations re: test procedures and environment)

3) What do you know about audiologists? Do you know, for example, what training they have?

4) What are your feelings about getting your hearing tested?

5) What would you like to see come out of the hearing test? What are your hopes?

6) Do you think you may have to get a hearing aid?

7) How do you feel about that?

8) What do you know about hearing aids?

9) Where do you think a hearing aid would help you? Is there any down side to having one?

10) Do you think hearing is a part of health?

11) Do you have any fears about your hearing getting worse?
APPENDIX D

Interview 3: Topic Areas

Post-audiologic Assessment

1) What are your impressions about the hearing test today?
2) Can you tell me in your own words what the results of the test show about your ears?
3) Do the results today seem to match what you thought about your ears?
4) How do you feel about the test results?
5) Was there anything in the procedures (or environment) that was unexpected? Were there any surprises?
6) Was there anything that you expected in today’s test that didn’t happen?
7) Do you still have questions about the test or the results?
8) Do you think I had an influence on you or the test by being there today?
9) Would you say the test overall was a positive, neutral or negative experience?
APPENDIX E

Interview with Family Member: Topic Areas

1) How would you describe your wife’s/mother’s hearing?
2) How long would you say her hearing has been a problem?
3) What situations are a problem for her?
4) What does she do to hear better in those situations?
5) What sort of things do you do to help your wife/mother to hear better?
6) Has there been any significant change in her hearing over the last year?
7) Has there been any change in her lifestyle recently?
8) How do you think her hearing loss affects her? Has it affected her quality of life?
9) What do you think has prompted her to make an appointment for a hearing test now as opposed to, say, last year?
10) Do you think that her hearing is a source of discord or tension in your family at all?
11) (to husbands with hearing aids) Do you think you have been influential in your wife getting her hearing tested?
APPENDIX F

Interview with Audiologist: Topic Areas

1) What are your impressions of this appointment and this patient?

2) What do you think her expectations were for this appointment?

3) To what extent do you think her expectations were met or not met in terms of the test?

4) What were your goals and expectations for this appointment?

5) Do you think the appointment went well?

6) Is there anything you thought could have gone better in today's test?

7) Is there anything you would do differently in retrospect?

8) Was there anything unusual or atypical about this patient?

9) Did you learn anything from this appointment?

10) What effect do you think my presence had during testing today?
APPENDIX G

Instructions for Journal Writing

I am giving you a blank book for you to write about your day-to-day experiences with your hearing.

Some people keep a journal or diary all the time; others have never kept a journal. The comments here should help you with this part of this study on hearing.

1) Try to write every day between now and the day of your last interview for this study. Ten minutes a day is all that is asked of you. Feel free to write for more than ten minutes any day you are inspired to do so.

2) You may find it helpful to get in the habit of writing at the same time every day, for example, just before retiring in the evening, or just after breakfast.

3) You are asked to write about your experiences day-to-day with hearing. Examples of things to focus on are: an activity you were involved in today and how it may have been affected by your hearing; your mood or emotions today and whether you think your hearing was a factor in how you felt today; describe a particular communication interaction with a friend or family member and how hearing played a role; reflect on how you feel about getting your hearing tested. Your experiences may be positive, negative, or neutral.

4) Don’t worry about the form your writing takes- forget about grammar and spelling and whether what you write looks ‘correct’. The content is what counts and the spontaneity of writing just what you feel without worrying about how it looks.
APPENDIX H

"Client Intake History" Form

CLIENT INTAKE HISTORY
v 3.2 12/95

1. Circle the symptoms you are experiencing.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>YES</th>
<th>NO</th>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing Loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dizziness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinnitus (ringing, buzzing or sounds in the ear)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Did the symptoms appear SUDDENLY or GRADUALLY?

3. Do you have, or have you had any of the following?

<table>
<thead>
<tr>
<th>Condition</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a personal history of ear problems or ear surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a family history of ear problems or hearing loss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ear pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ear drainage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>allergies/sinus/hay fever problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>itchy ears</td>
<td></td>
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<tr>
<td>frequent wax build-up</td>
<td></td>
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<tr>
<td>serious head injury</td>
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<tr>
<td>a heart attack</td>
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<td></td>
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<tr>
<td>a stroke</td>
<td></td>
<td></td>
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<tr>
<td>high blood pressure - are you on medication?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>diabetes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kidney dialysis</td>
<td></td>
<td></td>
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<tr>
<td>chemotherapy/radiation treatments</td>
<td></td>
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</tr>
</tbody>
</table>

4. Do you believe any of the following may have damaged your hearing?

<table>
<thead>
<tr>
<th>Factor</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>prescription medications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>noise exposure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>exposure to toxic chemicals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other (describe)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Do you experience difficulty hearing in any of the following situations?

<table>
<thead>
<tr>
<th>Situation</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>on the telephone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the television</td>
<td></td>
<td></td>
</tr>
<tr>
<td>social gatherings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>at meetings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Whose idea was it to have an audiological evaluation? Circle One

<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>My Own</td>
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</tr>
<tr>
<td>A friend</td>
<td></td>
</tr>
<tr>
<td>W.C.B.</td>
<td></td>
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<tr>
<td>My doctor</td>
<td></td>
</tr>
<tr>
<td>A family member</td>
<td></td>
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<tr>
<td>Veterans' Affairs</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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</tbody>
</table>

7. Have you ever used a hearing aid? YES NO If yes, which ear? LEFT RIGHT For how long? ______

8. What was your level of satisfaction? POOR FAIR GOOD EXCELLENT

9. Please feel free to add any additional information or comments you believe might be relevant.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
APPENDIX I

Sample of Audiologic Test Results

Client's Subjective Impressions:

Left ear sharper

no strong binural advantage

Registered Audiologist: Aud.(C), CCC/A
## APPENDIX I

(continued)

<table>
<thead>
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<tr>
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APPENDIX J

Description of Audiologic Assessment and Test Environment

The researcher was present as a participant observer for the duration of each participant's audiologic assessment. Each assessment followed the same general format as described below (standard testing procedures are described in detail in audiology textbooks, e.g., Martin, 1994).

Environment: All testing was conducted in a double-walled sound-attenuating booth (model IAC). The booth is divided into two small rooms. On the common wall is a window through which the audiologist and patient can see each other. The room in which the patient sits measures approximately 6-x-6 ft². The patient is seated at about a 45 degree angle to the window. There is a microphone mounted on the window wall to pick up the patient’s voice.

The test side of the booth also measures approximately 6-x-6 ft². The audiologist sits at a Grason-Stadler audiometer, Model G16, facing toward the patient. A dimmer switch allows the audiologist to adjust the light so that she can see the patient better than the patient sees her. I was seated in the corner of the tester’s room on a small stool that permitted me to see the patient through the window better than she could see me. For all but the first participant, the tape recorder was situated beside the audiometer on the tester side of the booth, as close as possible to the monitor speaker of the audiometer in order to pick up the participant’s responses and comments, as well as the audiologist’s voice. For the first participant, the tape recorder was set up on the patient’s side of the booth; thus the audiologist’s voice was lost, since she spoke to the patient under earphones for most of the testing. I ensured that the tape recorder and myself were in place before the audiologist escorted the participant from the waiting room to the test booth to begin testing.

Procedures: Each assessment began with the audiologist reviewing the information each participant filled out on a “client intake history” form while in the waiting room (see
APPENDIX J
(continued)

Appendix H). The audiologist added comments to the form, as she talked to the participant. Following a brief inquiry into what brought the participant to have her hearing tested, the audiologist examined the external ear canals before explaining the test procedure for a pure tone assessment. Here is an excerpt from one assessment where the audiologist describes the test procedure to the patient:

A: Now what I’d like to do is get..with your help..(u-huh) a chart of what you’re able to hear...now to..next door behind you in the other room is a machine that like a piano makes different notes or tones (u-huh) so when the door closes it will get very very quiet in here and way off in the distance you’ll hear this beep beep beep a pattern of three (u-huh) and what I’d like you to do is to patiently wait til you’ve heard all three (ok) and if you’re confident..oh yes I heard that pattern of three (ok) then I want you to push and let go of this button (5-audio-4)

Testing was usually conducted first by bone conduction (using a headband with a bone conduction oscillator placed just behind one ear over the mastoid bone), then by air conduction (via earphones). The audiologist placed the bone conductor or earphones on the participant and went to the tester side of the booth. The testing of pure tones (via bone and air) yielded an audiogram, which is a graph that shows one’s thresholds for tones of various pitches (frequencies) between 250 Hz (cps) and 8000 Hz. (see Appendix K for more information on the audiogram).

After the audiogram was completed, the audiologist tested the participant’s understanding of speech under earphones, first with a speech recognition threshold test (SRT), which is used to measure the lowest decibel level at which a patient can repeat two-syllable words that have an equal stress on each syllable (words like baseball, fire truck, ice cream etc.). Following this, the participant was asked to repeat a list of one-syllable words, presented one at a time with a carrier phrase “say the word-”. These words were presented at an average conversational level with some background (masking) noise. After this, the audiologist measured the participant’s tolerance for loud sound, by talking to her at successively louder levels and asking her to indicate when her voice was at an
uncomfortably loud level. A measure of “most comfortable level” was also taken. Throughout all test procedures, the audiologist and patient/participant were able to speak with each other. When the testing was completed, the audiologist returned to sit with the participant on the patient side of the test booth to explain the test results and recommendations. If another family member accompanied the participant to the test, he or she was invited to sit in on this counselling session. The audiologist accompanied the participant (and family member, if present) back to the waiting area at the front of the office when counselling (and the appointment) was over.
APPENDIX K

Explanation of Audiologic Tests and their Interpretation (reference: Martin, 1994)

SRT Speech recognition (or reception) threshold: the lowest hearing level at which 50% of spondees are repeated correctly. A spondee is a two-syllable word, pronounced with equal stress on each syllable.

MCL Most comfortable loudness level: the hearing level at which speech is most comfortably loud for a listener. Informal running speech is used as the stimulus by the audiologist.

UCL Uncomfortable loudness level: The level of speech that is uncomfortably loud for a listener; here determined using speech noise (SPN).

Discrimination in noise:
A measurement of a listener’s ability to repeat speech. The audiologist in the present study presented a list of 20 one-syllable words (see Appendix J) in a background of speech noise. The patient was instructed to listen to and repeat the word spoken at the end of the phrase “say the word-“. The number of correctly repeated words was expressed as a percentage score.

Reading the Audiogram:
An audiogram records the lowest level at which tones of various frequencies (pitches) can be detected 50% of the time (threshold) by a listener. The X-axis of an audiogram shows frequencies, with the usual test frequencies falling between 250 and 8000 Hz or cycles per second (for reference, the standard tuning note “A” above middle C on the piano is 440 Hz; the top note on the piano (“C”) is 4186 Hz). The Y-axis of an audiogram shows sound pressure level in decibels or how loud the delivered tone has to be before it reaches threshold (for reference, normal hearing falls within 0-20 dB HL (decibel hearing level); the level of normal conversational speech is 40-50 dB HL). The gray banana-shaped area superimposed on the audiogram (typically referred to as the “speech banana”) serves to highlight (mostly for counselling purposes) the frequency and intensity ranges encompassed by normal English conversational speech sounds. Right-ear responses are marked on the graph with the symbol O; left ear responses with X. Bone-conduction responses are marked < for right ear (mastoid bone) placement; > for left ear placement.

A listener with thresholds in the range of 25-40 dB HL is said to have a “mild” hearing loss; thresholds in the range of 45-55 dB HL represent a “moderate” loss; thresholds of 60-70 dB HL represent a “moderately-severe” loss; 75-90 dB HL is considered a “severe” loss; a loss greater than 90 dB HL is labeled a “profound” loss. Hearing loss due to presbycusis tends to be similar in both ears and slope from near-normal thresholds for low frequencies to greater losses in the high frequencies.
APPENDIX L

Transcription Key

The following symbols apply to the transcribed quotations of participants:

Symbol: Indicates:

e.g.,(2-4-7) placed at the end of a quotation, indicating source of the quotation; e.g., this example shows the quotation is from participant 2, interview 4, transcript page number 7
I: placed at the beginning of a quotation to indicate Interviewer’s talk
C: is Cheryl; P: is Phyllis; J: is Janet; M: is Marjorie; F: is Frances; L: is Louise; B: is Betty
.. short pause, less than .5 sec
... medium pause, greater than .5 sec, but less than 1 second
(1 sec) long pause, with length noted in parenthesis
: lengthened vowel sound (extra colons indicate greater lengthening)
to’ I do apostrophe indicates an utterance interrupted for another utterance by same speaker without perceptible pause
(u-huh) response of one speaker within another speaker’s turn; also called a backchannel response
underline a word or words stated with emphasis
! spoken in an animated tone of voice
? spoken with a questioning intonation

I: < well how> overlapping speech; that is, two people talking at the same time
P: <then I >went

I: well how> latched speech; that is, the second talker begins at end of first talker’s utterance, without perceptible pause
P: <then I went

(xxx) utterance undecipherable from audiotape, for which a good guess can be made as to how many syllables were uttered.
Each x equals one syllable

{short chuckle} description inserted by interviewer/author of non-lexical phenomena or words that serve to provide context

// a portion of an utterance has been omitted in an example
APPENDIX M
(continued)

In addition, you will be given a questionnaire to complete at home to assess your hearing problems. You will also be asked to spend ten minutes or so a day writing down your thoughts, feelings, and experiences related to your hearing. This daily journal will be shared with Ms. Carson during a later interview. Full instructions on this journal writing will be provided by Ms. Carson.

As a subject, you agree to allow Ms. Carson to attend your audiology appointment at as an observer, and to audiotape this test session. You also agree to allow Ms. Carson to receive a copy of your test results from the audiologist. Ms. Carson will in no way be involved in the decisions you or the audiologist make regarding your hearing health care. If, at any time, you indicate that you are uncomfortable with Ms. Carson’s presence at your appointment, she will withdraw from the test session.

All information gathered on all subjects in this study will remain completely confidential. No individual will be identified in any public presentations, written and oral, of this study. Information gathered during the project will be identified by a code known only to Ms. Carson and her advisor, Dr. Pichora-Fuller. No one else, except perhaps a typist hired to transcribe audiotapes, will ever listen to the audiotapes or read the transcripts. If a typist is hired, she/he will agree to maintain subject confidentiality.

The total time required of you as a subject over the next six weeks will be between seven (7) and fifteen (15) hours for all interviews, journal writing and questionnaire completion. If you complete this study you will be offered $125.00 in appreciation of your time and input.

Your participation is strictly voluntary. You may refuse to participate in this study, or at any time after agreeing to participate in it, you may withdraw from the project without any consequence. Your participation or lack of participation will in no way affect the service or consultation you receive regarding your hearing from or any other audiologist or hearing aid dispenser.
APPENDIX P

Audiologic results for PI "Cheryl"

Client's Subjective Impressions:

R ear a little better
binaural improved ease of listening

Registered Audiologist Aud.(C), CCC/A
APPENDIX P

Audiologic results for P2 "Phyllis"

"Phyllis"  P2

.client's Subjective Impressions:

me a little bit clearer
APPENDIX P

Audiologic results for P3 "Janet"

Client's Subjective Impressions:
- Left ear sharper
- No strong binural advantage
APPENDIX P

Audiologic results for P4 "Marjorie"

"Marjorie" P4

Client's Subjective Impressions:
- Left louder

Audiologist Comments:
- 8/97
- Registered Audiologist Aud.(C), CCC/A
APPENDIX P

Audiologic results for P5 “Frances”

FiflC

H

1

RBC

LRC

LBC

SPEECH TESTS

CLIENT’S SUBJECTIVE IMPRESSIONS:

Registered Audiologist Aud.(C), CCC/A
APPENDIX P

Audiologic results for P6 “Louise”

"Louise" P6

Frequency Hz

Intensity, dB HL (ANSI 69)

Masking

RAC

RBC

LAC

LBC

SPEECH TESTS

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<th>RELIABILITY</th>
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<tr>
<td>VRA</td>
<td>POOR</td>
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PURE TONE AVERAGE

(.5, 1, 2KHz.)

LEFT 25 dB

RIGHT 35 dB

OTOSCOPI

CEV ml SC ml

LE -20 0.85 0.93

RE -5 0.77 1.73

TYMPANOGRAM

MEP, daPa ECV ml SC ml

STAPEDIAL REFLEXES

Contra lateral

Ipsilateral

FREQ 500 1000 2000 4000 1000 2000

LEFT HL

LEFT SL

RIGHT HL

RIGHT SL

REFLEX DECAY

SPL

SPL

SPL

SPL

Audiologist Comments:

Client’s Subjective Impressions:

R a little lower.

Lears similar

no strong binural advantage.

8/97
APPENDIX P

Audiologic results for P7 "Betty"

Client's Subjective Impressions:
- Louder + clearer in quiet + noise
- Binaural = louder + more distinct

Audiologist Comments:

Registered Audiologist Aud.(C), CCC\/